

Submitting BADM in CSV format (and new BADM webpages!)

Hosted by AmeriFlux Management Project



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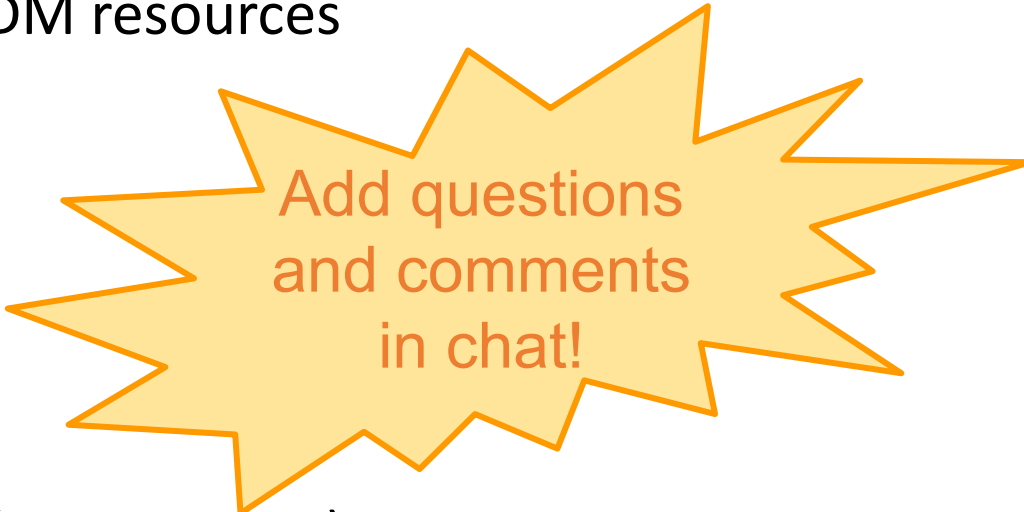
Webinar Goals

Who should attend:

- Site teams who have submitted or plan to submit BADM
- Data users who want to understand AmeriFlux BADM resources

Presentation (~40 minutes):

- BADM overview
- Examples of submitting BADM using CSV

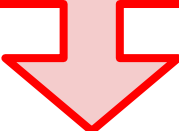


Add questions
and comments
in chat!

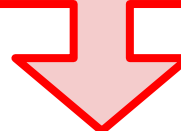
Q&A: Polls within presentation and discussion at end (~20 minutes)

This webinar is recorded. Presentation & video will be made available on AmeriFlux website.

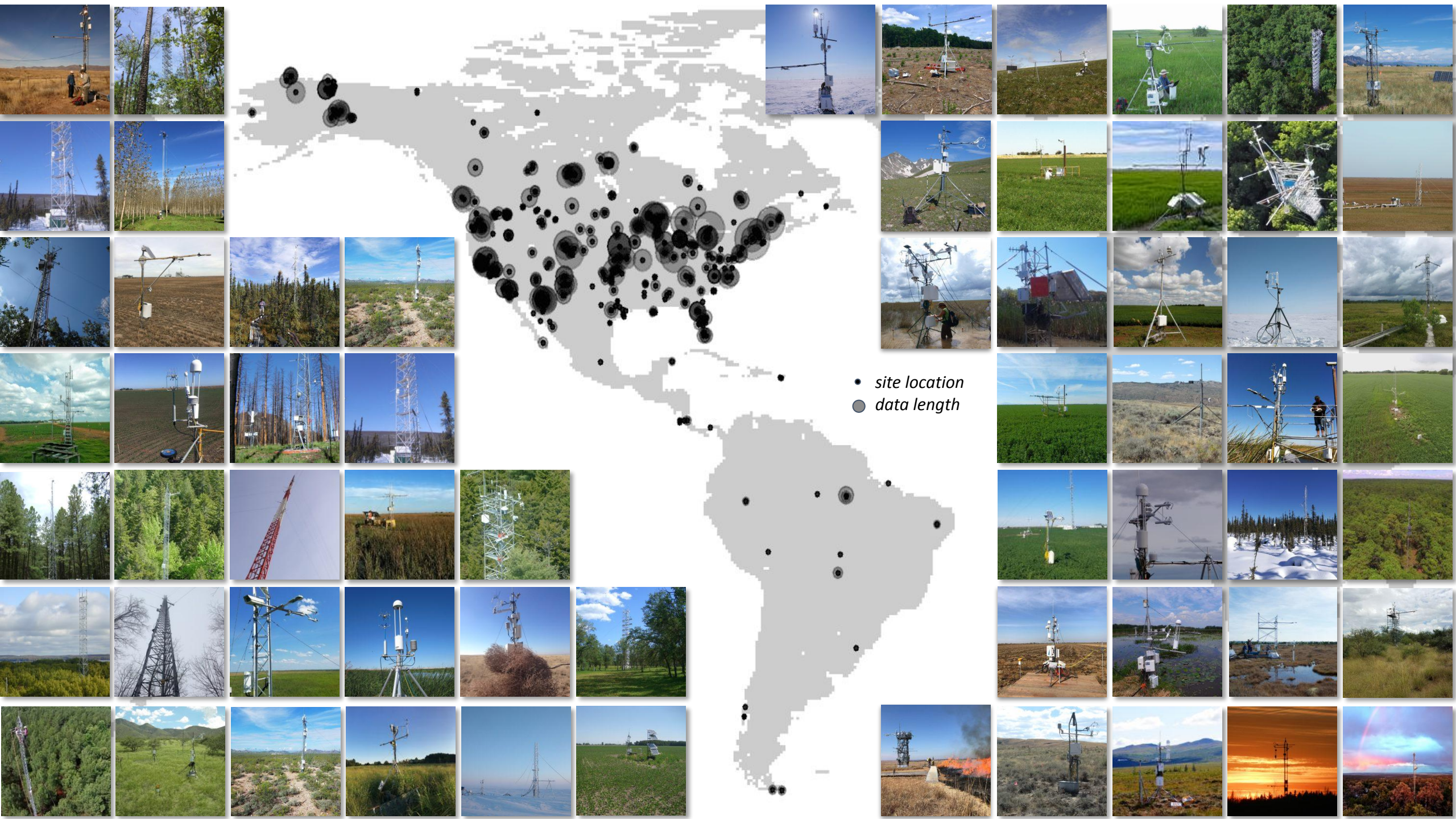
Mute during presentation.
Unmute for Q&A.



View chat window.
Send messages for questions,
comments & zoom help.



Technical support in webinar
AMP-webinars@lbl.gov




What is BADM?

- **B**iological, **A**ncillary, **D**isturbance and **M**etadata
- Standardized protocol across AmeriFlux, FLUXNET, etc.
- Contextual data for sites
 - Interpret Flux/Met data
 - Ecosystem characteristics
 - Disturbances
 - Intermittent measurements



US-xSL: NEON North Sterling, CO (STER)

Examples of BADM: Site General Info



[Home](#)
[About](#)
[Community](#)
[Sites](#)
[Data](#)
[Tech](#)
[Theme Years](#)
[Resources](#)

[Home](#) / [Sites](#) / [Siteinfo](#) / [BR-Npw](#)

Quick Sites:
[Recents](#)
[Favorites](#)

BR-Npw: Northern Pantanal Wetland

Overview	Windroses	DOI	Data Use Log	Image Gallery	MODIS	Publications	BADM
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Tower_team:

PI: George Vourlitis georgev@csusm.edu - California State University, San Marcos

PI: Higo Dalmagro higojdalmagro@gmail.com - Universidade de Cuiabá

PI: José de S. Nogueira nogueira@ufmt.br - Universidade Federal de Mato Grosso

PI: Mark Johnson mark.johnson@ubc.ca - University of British Columbia

PI: Paulo Arruda paulo.zanella@gmail.com - Universidade Federal de Mato Grosso

Lat, Long: -16.4980, -56.4120

Elevation(m): 120

Network Affiliations: AmeriFlux

Vegetation IGBP: WSA (Woody Savannas: Lands with herbaceous and other understory systems, and with forest canopy cover between 30-60%. The forest cover height exceeds 2 meters.)

Climate Koeppen: Aw (Tropical savanna)

Mean Annual Temp (°C): 24.9

Mean Annual Precip. (mm): 1486

Flux Species Measured: CO₂, CH₄, H, H₂O

Years Data Collected: 2013 - 2017


Years Data Available: 2013 - 2017 [DOIs to use for Citation of Data](#)

Description: The site is located in the northern Pantanal in central South America. The site is subject to seasonal flooding with distinct wet seasons (November to ... [See More](#))

URL: —

Research Topics: Carbon fluxes, wetland processes

Acknowledgment: Brazilian National Institute for Science and Technology in Wetlands (INCT-INAU), Federal University of Mato Grosso (UFMT - PGFA and PGAT), University of Cuiabá (UNIC) and SESC-Pantanal.



Map data ©2021 [Terms of Use](#)

Site Photo [More Site Images](#)




Image Credit: Higo Dalmagro
Copyright preference: As long as credit is given

Site Publication [More Site Publications](#)

2 Examples of BADM: DOI

AmeriFlux BR-Npw Northern Pantanal Wetland

Dataset Creator(s)

Name George Vourlitis
Email georgev@csusm.edu
Affiliation California State University, San Marcos

Name Higo Dalmagro
Email higojdalmagro@gmail.com
Affiliation Universidade de Cuiabá

Name José de S. Nogueira
Email nogueira@ufmt.br
Affiliation Universidade Federal de Mato Grosso

Name Mark Johnson
Email mark.johnson@ubc.ca
Affiliation University of British Columbia

Name Paulo Arruda
Email paulo.zanella@gmail.com
Affiliation Universidade Federal de Mato Grosso

Dataset Description

This is the AmeriFlux version of the carbon flux data for the site BR-Npw Northern Pantanal Wetland. Site Description - The site is located in the northern Pantanal in central South America. The site is subject to seasonal flooding with distinct wet seasons (November to April) and dry seasons (May to October).

Dataset Information

Originating Research Organization(s) California State University, San Marcos
Universidade de Cuiabá
Universidade Federal de Mato Grosso
University of British Columbia

Country Brazil

Sponsor Organization(s) CNPq
INCT-INAU



USEFUL LINKS

[People](#)
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[Tech Blog](#)
[Data Blog](#)
[Safety](#)
[Research Highlights](#)
[Publications](#)
[AmeriFlux Flyers](#)

3 Examples of BADM: Many more...



Root Depth
Soil Characterization



US-HB4: Minim Creek Brackish Impoundment

Sensor calibration/installation
Sensor location



How to submit BADM to AmeriFlux

- Excel Templates: Site General Info for site registration
- Web tools: Site General Info, DOI, Variable Information
- ➔ - CSV Comma Separated Value: new **preferred** format for all other BADM

BADM Editor: DOI US-UTW: UFLUX Wellington

* indicates required field
? get more information

GRP_DOI_ORGANIZATION

DOI_ORGANIZATION* ?

DOI_ORGANIZATION

DOI_ORGANIZATION_ROLE* ?

Select DOI_ORGANIZATION_ROLE

(Description of options)

Save

Cancel

Add New Entry

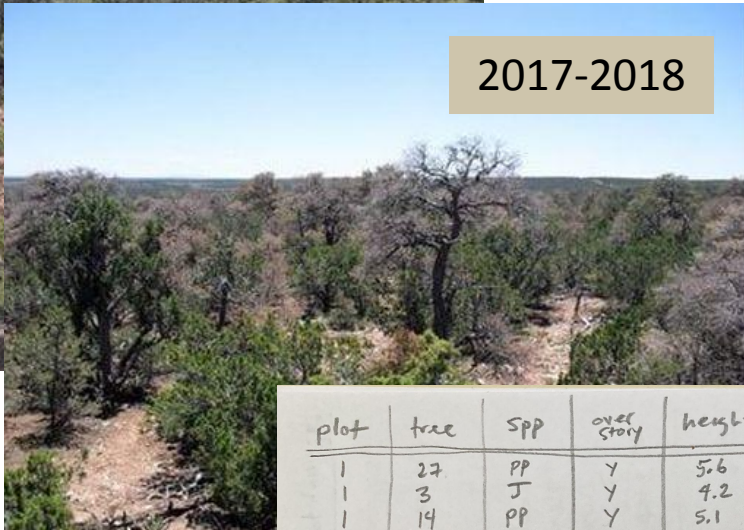
GRP_DOI_CONTRIBUTOR

GRP_DOI_RELATED_DATA_DOI

Site General Info MS Excel Template

Variable	Description	Units
1 SITE_ID	Six character site identifier. MANDATORY if site is already registered	CC-Xxx
3 SITE_NAME	Site name	free text
4 SUBMISSION_CONTACT_NAME	Name of person who submitted this template	free text
5 SUBMISSION_CONTACT_EMAIL	E-mail address of the person who submitted this template	free text
6 SUBMISSION_DATE	Date this submission was last edited/modified.	YYYYMMDD
7 TEAM_MEMBER_NAME	Site tower team member name (First Last/Family).	free text
8 TEAM_MEMBER_ROLE	Site tower team member role	LIST(Team_ROLE)
9 TEAM_MEMBER_EMAIL	Site tower team member email	free text
10 TEAM_MEMBER_INSTITUTION	Site tower team member institution (required for PI only)	free text
11 TEAM_MEMBER_ADDRESS	Site tower team member address (not required)	free text
12 SHIPPING_ADDRESS	Site tower shipping address	free text
13 NETWORK	Network affiliation(s) of the site.	LIST(NETWORK)
14 FLUX_MEASUREMENTS_METHOD	Method used to measure the flux variables	LIST(FLUX_METHOD)
15 FLUX_MEASUREMENTS_VARIABLE	Flux variable measured	LIST(FLUX_VARIABLE)
16 FLUX_MEASUREMENTS_DATE_START	Date when data collection for the reported flux variable/method started.	YYYYMMDD
17 FLUX_MEASUREMENTS_DATE_END	Date when data collection for the reported flux variable/method ended	YYYYMMDD
18 FLUX_MEASUREMENTS_OPERATIONS	Operational status of flux measurements.	LIST(FLUX_OPERATIONS)
19 FLUX_MEASUREMENTS_COMMENT	Flux measurements comments	free text
20 STATE	State or province	LIST(STATE_PROVINCE)
21 SITE_DESC	Short description of the site characteristics and history	free text
22 RESEARCH_TOPIC	Site research topics	free text
23 SITE_FUNDING	Site funding agencies/institutions (one column only)	free text
24 LOCATION_LAT	Latitude of the site.	decimal deg ref WGS84
25 LOCATION_LONG	Longitude of the site	decimal deg ref WGS84
26 LOCATION_ELEV	Elevation of the site above sea level	m
27 LOCATION_DATE_START	Begin date of the location information	YYYYMMDD
28 LOCATION_COMMENT	Location information comments	free text
29 IGBP	Vegetation type based on the IGBP definition.	LIST(IGBP)

Examples: insect disturbance and canopy height using CSV file

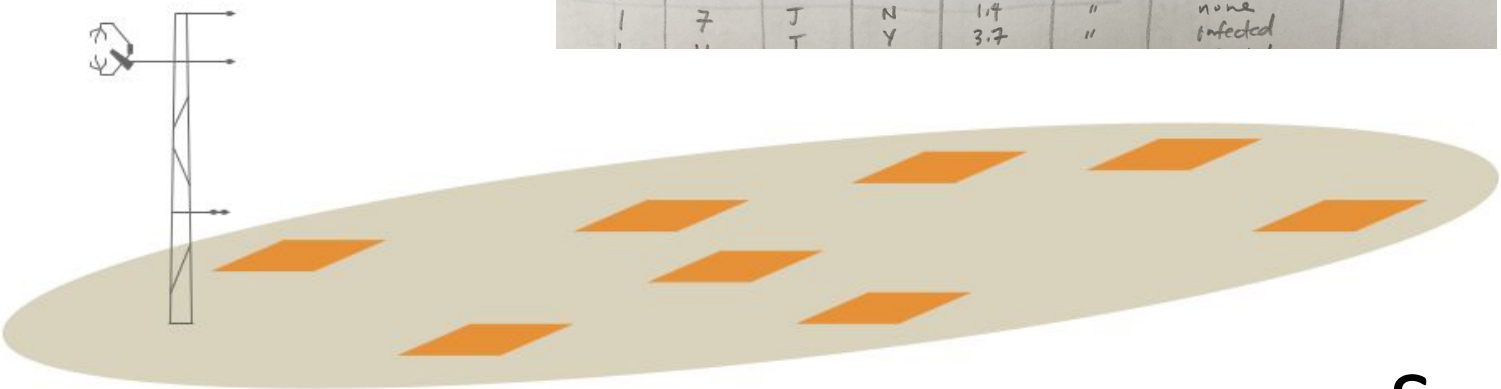


plot	tree	Spp	over story	height	date	insect damage	notes
1	27	PP	Y	5.6	01-JUN-18	infected	
1	3	J	Y	4.2	"	dead w/ foliage	
1	14	PP	Y	5.1	"	none	
1	32	J	N	2.1	"	dead	
1	5	J	N	3.2	"	none	
1	7	J	N	1.4	"	none	
1	11	T	Y	3.7	"	infected	



CSV Reporting File						
	A	B	C	D	E	
1	SITE_ID	HEIGHTC	HEIGHTC_SPP	HEIGHTC_VEGTYPE	HEIGHTC_STATISTIC	HEIGHTC
2	Required	1-Required	1-Optional-a	1-Optional-a	1-Required	Optional
3	CC-Sss	m	Scientific name	LIST(VEGTYPE)	LIST(STATISTIC)	free text
4						
5						
6						

CSV = comma separated values



So, how do you get there...

photos: <http://www.litvaklab.org/consequences-of-pinon-mortality-for-pj-woodlands.html>; data: bogus

New BADM webpages

<https://ameriflux.lbl.gov/data/badm/>

BADM: Biological, Ancillary, Disturbance, and Metadata

About BADM

Biological, Ancillary, Disturbance, and Metadata (BADM) complement continuous flux and meteorological (Flux) data by providing information about the sensors and their setup, maintenance and characterization to help users understand and characterize a site's ecosystem.

BADM are submitted and distributed following BADM Standards. The BADM Standards are co-developed and used by the AmeriFlux community. For more information see BADM Basics.

Download

Download AmeriFlux BADM Basics

How to Submit

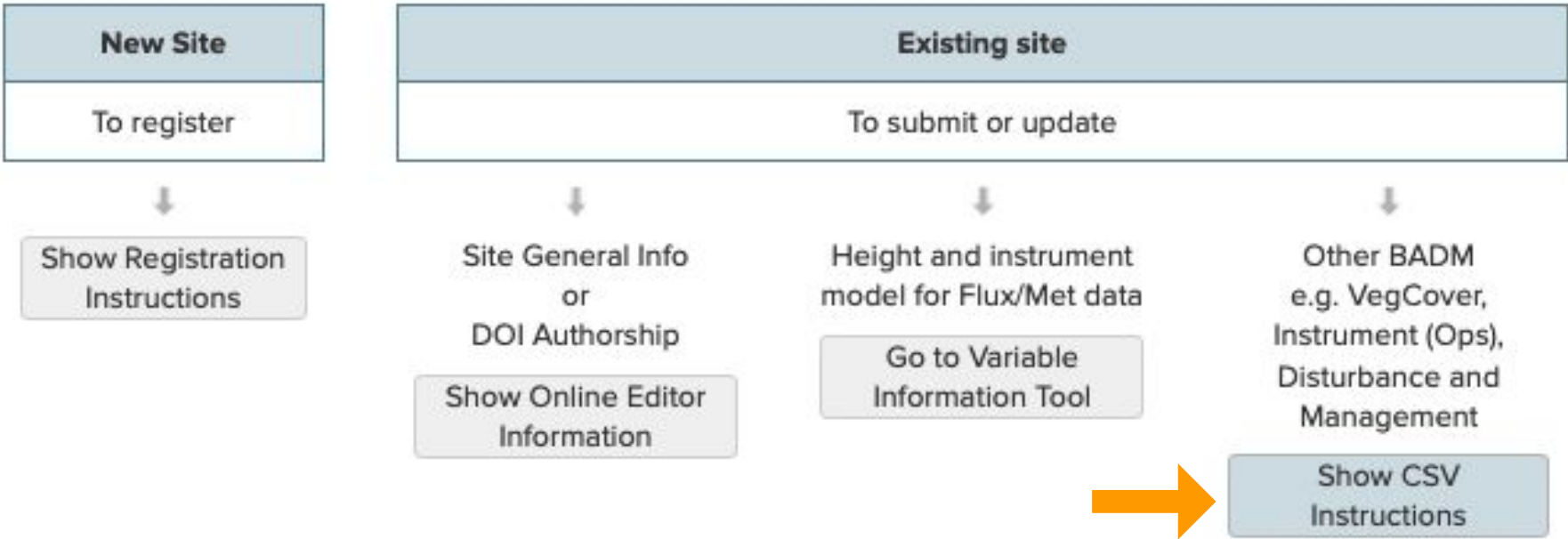
How To Submit BADM

Browse

Browse definitions and standards

BADM Submission Instructions

Follow the instructions below to submit Biological, Ancillary, Disturbance and Metadata (BADM) to AmeriFlux. Learn more at [BADM Basics](#).



To see instructions, click a button above.

Submission Instructions: Customize CSV

<https://ameriflux.lbl.gov/data/badm/badm-submission-instructions/>

BADM Submission Instructions

Follow the instructions below to submit Biological, Ancillary, Disturbance and Metadata (BADM) to AmeriFlux. Learn more at [BADM Basics](#).

New Site

To register

Existing site

To submit or update

Show Registration Instructions

Site General Info or DOI Authorship

Show Online Editor Information

Height and instrument model for Flux/Met data

Go to Variable Information Tool

Other BADM e.g. VegCover, Instrument (Ops), Disturbance and Management

Show CSV Instructions

To see instructions, click a button above.

To submit BADM using a CSV reporting file

BADM can be submitted in CSV file format; one BADM group per file. BADM for multiple sites can be submitted together in the same file.

1

Navigate to BADM group of interest on the [Browse BADM Standards](#) page.

Browse BADM Standards

Veg Cover

- SPP (Species Cover)
- LAI (Leaf Area Index)
- HEIGHTC (Canopy Height)
- SA (Stand Age)
- DBH (Diameter at Breast Height)
- BASAL_AREA

2

Customize the group.

Customize CSV tab

Required

☒ HEIGHTC

HEIGHTC_SPP

OR

HEIGHTC_STATISTIC

HEIGHTC_STATISTIC_METHOD

Download Custom CSV File

3

Download your customized CSV file.

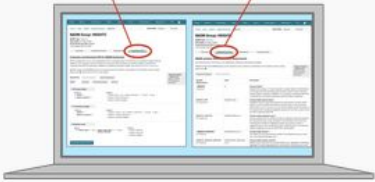
The following types and groups of BADM are submitted by uploading files:

- Veg Cover:** Canopy Height, LAI, Phenology, Vegetation composition and structure
- Disturbance & Management**
- Instrument and Instrument Ops:** Detailed instrument installation and maintenance info
- Soil:** Chemistry, Texture, Classification
- Biomass:** Productivity, Chemistry

You may want to have two tabs open side by side: The "Customize CSV" tab and the "Definitions and Units" tab:

"Customize CSV" tab

"Definitions and Units" tab



Submission Instructions: Customize CSV

<https://ameriflux.lbl.gov/data/badm/badm-submission-instructions/>

BADM Submission Instructions

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New Site
To register
↓
Show Registration Instructions

Existing site
To submit or update

1 Navigate to BADM group of interest on the Browse BADM Standards page.

Browse BADM Standards

Veg Cover

- SPP (Species Cover)
- LAI (Leaf Area Index)
- HEIGHTC (Canopy Height)
- SA (Stand Age)
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- BASAL_AREA

To see instructions, click a

To submit BADM using

BADM can be submitted in

BADM group per file. BADM

be submitted together in the

1 Navigate to BADM group of interest on the Browse BADM Standards page.

Browse BADM Standards

Veg Cover

- SPP (Species Cover)
- LAI (Leaf Area Index)
- HEIGHTC (Canopy Height)
- SA (Stand Age)
- DBH (Diameter at Breast Height)
- BASAL_AREA

• Disturbance

• Instrument

• Instrument

• Soil: Chemical

• Biomass

You may want to

side: The "Customize CSV" tab and the "Definitions and Units" tab:

"Customize CSV" tab

"Definitions and Units" tab

2 Customize the group.

Customize CSV tab

☒ Required

☐ Optional

☒ HEIGHTC

☒ HEIGHTC_STATISTIC

☐ HEIGHTC_SPP

☐ HEIGHTC_METHOD

☐ HEIGHTC_STATISTIC_METHOD

Download Custom CSV File

3 Download your customized CSV file.

1 Navigate to BADM group of interest on the Browse BADM Standards page.

Browse BADM Standards

Veg Cover

- SPP (Species Cover)
- LAI (Leaf Area Index)
- HEIGHTC (Canopy Height)
- SA (Stand Age)
- DBH (Diameter at Breast Height)
- BASAL_AREA

2 Customize the group.

Customize CSV tab

☒ Required

☒ HEIGHTC

☒ HEIGHTC_STATISTIC

Download Custom CSV File

3 Download your customized CSV file.

Downloaded CSV file

CSV Example

Site ID	HEIGHTC	HEIGHTC_SPP	HEIGHTC_METHOD	HEIGHTC_STATISTIC
Required	Optional	Optional	Optional	Optional
CCFile	cc	Scientific name	LAI/VEGETATION	LAI/VEGETATION

4 Enter your site's BADM in the CSV file.

5 Upload the completed csv file via the **Upload Data** page using the **BADM** option.

For multiple sites, choose one of the sites included in the file for the Site ID.

Completed CSV file

Site ID	HEIGHTC	HEIGHTC_SPP	HEIGHTC_METHOD	HEIGHTC_STATISTIC
Required	Optional	Optional	Optional	Optional
CCFile	cc	Scientific name	LAI/VEGETATION	LAI/VEGETATION

Upload Data: BADM

By clicking Upload I acknowledge that I have read

Upload **Clear All Files**

Select BADM Group

Browse BADM Standards

<https://ameriflux.lbl.gov/data/badm/badm-standards/>

BADM Standards define the variables, units, and requirements for BADM. BADM are organized into a hierarchy: types, groups, subgroups (optional), and variables. See [BADM Basics](#) for more details.

Browse BADM Variables by Group

Click a BADM group below (organized by types) to view details for the group. A customizable CSV file can be generated on the group page for BADM submission to AmeriFlux. BADM Standards in MS Excel files can be downloaded [here](#). Some BADM types (e.g., Biomass, CNKP, Fluxes) are scheduled for update. Contact ameriflux-support@lbl.gov, if you are looking for BADM groups not included on this page.

Site General Info

- [COUNTRY](#) (Geographic Country)
- [URL_AMERIFLUX](#) (AmeriFlux URL)
- [HEADER](#) (Site ID, Site Name, Submission details)
- [TEAM_MEMBER](#) (Team Membership)
- [TEAM_CONTACT](#)
- [SHIPPING_ADDRESS](#)
- [NETWORK](#) (Network Affiliations)
- [FLUX_MEASUREMENTS](#)
- [STATE](#) (Geographic State)
- [SITE_DESC](#) (Site Description)
- [RESEARCH_TOPIC](#)
- [SITE_FUNDING](#)
- [LOCATION](#) (Geographic Location)
- [IGBP](#) (International Geosphere-Biosphere Programme)
- [LAND_OWNERSHIP](#)
- [URL](#) (Site Website)
- [REFERENCE_PAPER](#) (References)
- [ACKNOWLEDGEMENT](#)
- [UTC_OFFSET](#)

Instrument

- [INST](#) (Instrument Information)
- [INSTPAIR](#) (Instrument Pairing Information)

BADM Type → Disturbance and Management

- [DM_AGRICULTURE](#) (Crop Management)
- [DM_ENCROACH](#) (Encroachment)
- [DM_EXT_WEATHER](#) (Extreme Weather)
- [DM_FERT_M](#) (Mineral Fertilization)
- [DM_FERT_O](#) (Organic Fertilization)
- [DM_FIRE](#) (Fire)
- [DM_FORESTRY](#) (Forestry Management)
- [DM_GRAZE](#) (Grazing)
- [DM_INS_PATH](#) (Insect, Pathogen, Disease)
- [DM_PESTICIDE](#) (Pesticide Application)
- [DM_PLANTING](#) (Planting)
- [DM_TILL](#) (Tillage)
- [DM_WATER](#) (Water Management)
- [DM_GENERAL](#) (General Disturbance)

BADM Groups

2 Customize BADM Group

BADM Group: DM_INS_PATH

BADM Type: [Disturbance and Management](#)

Description: Insect, Pathogen, Disease

Group Entries per Site: Multiple

Last updated: Mar 02, 2021

Overview

Definitions & Units

Examples ⓘ

Customize CSV

BADM variables: Definitions, Units, Requirements

See Overview tab or [BADM Basics](#) for explanation of Required and Optional variables.

Multiple entries of this BADM group can be reported per site. However, combinations of © variables must be unique. Read more: ⓘ

Show All LIST Options

Hide All LIST Options

* **Required Variable**
Optional Variable
© Combinations
ⓘ Examples

Variable Requirements	Units	Description
* DM_INS_PATH <i>Required</i>	LIST(DM_INS_PATH) Show	Substantial insect, pathogen attack, or disease event
DM_SURF <i>Optional</i>	%	Percentage of the footprint area affected by the event
DM_SURF_MEAS_UNC <i>Optional</i>	%	Percentage of the footprint area affected by the event measurement uncertainty
* DM_DATE © <i>Required-a</i>	YYYYMMDDHHMM	Date of site disturbance ⓘ Please report the date at the precision known. Allowed reporting precision are YYYY, YYYYMMDD, and YYYYMMDDHHMM.
* DM_DATE_START © <i>Required-a</i>	YYYYMMDDHHMM	Start date of site disturbance ⓘ Please report the start date at the precision known. Allowed reporting precision are YYYY, YYYYMMDD, and YYYYMMDDHHMM.

2 Customize BADM Group

BADM Group: DM_INS_PATH

BADM Type: [Disturbance and Management](#)

Description: Insect, Pathogen, Disease

Group Entries per Site: Multiple

Last updated: Mar 02, 2021

Overview

Definitions & Units

Examples ⓘ

Customize CSV

BADM variables: Definitions, Units, Requirements

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Hide All LIST Options

* Required Variable

Optional Variable

© Combinations

ⓘ Examples

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* DM_DATE © <i>Required-a</i>	YYYYMMDDHHMM	Date of site disturbance ⓘ Please report the date at the precision known. Allowed reporting precision are YYYY, YYYYMMDD, and YYYYMMDDHHMM.
* DM_DATE_START © <i>Required-a</i>	YYYYMMDDHHMM	Start date of site disturbance ⓘ Please report the start date at the precision known. Allowed reporting precision are YYYY, YYYYMMDD, and YYYYMMDDHHMM.

2 Customize BADM Group

BADM Group: DM_INS_PATH

BADM Type: [Disturbance and Management](#)

Description: Insect, Pathogen, Disease

Group Entries per Site: Multiple

Last updated: Mar 02, 2021

[Overview](#)[Definitions & Units](#)[Examples ?](#)[Customize CSV](#)

BADM variables: Definitions, Units, Requirements

See Overview tab or [BADM Basics](#) for explanation of Required and Optional variables.

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[Show All LIST Options](#)[Hide All LIST Options](#)

* **Required Variable**

Optional Variable

© Combinations

? Examples

Variable <i>Requirements</i>	Units	Description
* DM_INS_PATH <i>Required</i>	LIST(DM_INS_PATH) Show	Substantial insect, pathogen attack, or disease event
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* DM_DATE_START © <i>Required-a</i>	YYYYMMDDHHMM	Start date of site disturbance ? Please report the start date at the precision known. Allowed reporting precision are YYYY, YYYYMMDD, and YYYYMMDDHHMM.

2 Customize BADM Group

BADM Group: DM_INS_PATH

BADM Type: [Disturbance and Management](#)

Description: Insect, Pathogen, Disease

Group Entries per Site: Multiple

Last updated: Mar 02, 2021

[Overview](#)[Definitions & Units](#)[Examples ?](#)[Customize CSV](#)

Customize and Download CSV for BADM Submission

After selecting your desired variables, download the customized CSV file for submission of BADM. For additional submission details, see [BADM Submission Instructions](#). See [BADM Basics](#) for general BADM details.

Multiple entries of this BADM group can be reported per site. However, combinations of © variables must be unique. Read more: [i](#). See [BADM Basics](#) for more details.

Open/Close

[Open All Subgroups](#)[Close All Subgroups](#)

Select

[Select All](#)[Only Select Required](#)[Clear All](#)

*** Required Variable**

Optional Variable

© Combinations

? Examples

^ ☐ Insect, Pathogen, Disease

☐ Required

* DM_INS_PATH

☐ *DM_DATE © ? ☐ OR ☐ *DM_DATE_START © ? ☐ Both ?

*DM_DATE_END ?

☐ Optional

☐ DM_SURF

☐ DM_SURF_MEAS_UNC

☐ DM_DATE_UNC ?

☐ DM_COMMENT

[Download Custom CSV File](#)

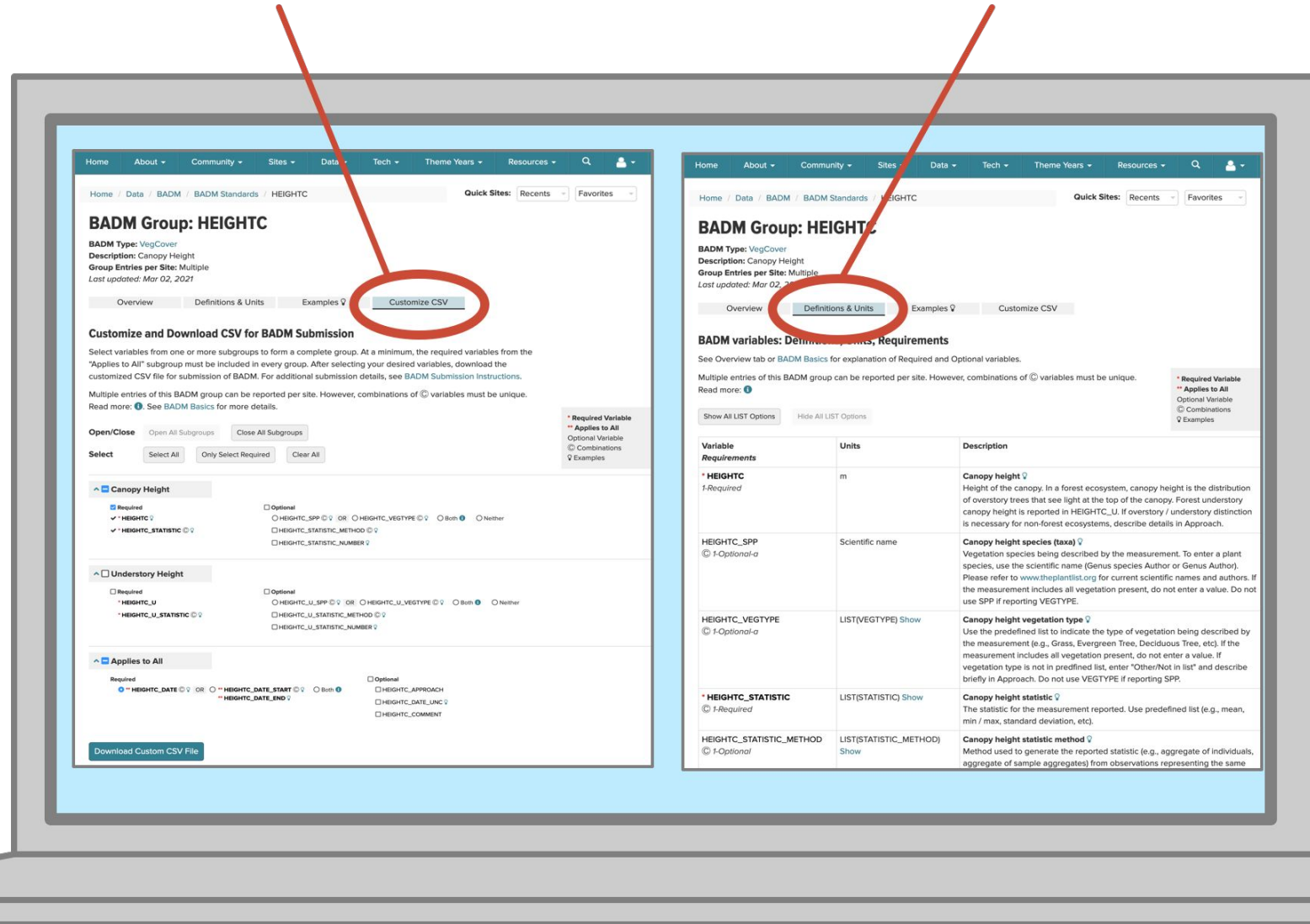
Submit completed CSV file at [Upload Data](#) using the BADM option (login required).

Tip: Dual browser tabs

Learn more: BADM Tips
<https://ameriflux.lbl.gov/data/badm/badm-basics/>

"Customize CSV" tab

"Definitions and Units" tab



2 Customize BADM Group

Overview

Definitions & Units

Examples ?

Customize CSV

Customize and Download CSV for BADM Submission

After selecting your desired variables, download the customized CSV file for submission of BADM. For additional submission details, see [BADM Submission Instructions](#). See [BADM Basics](#) for general BADM details.

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Open/Close

Open All Subgroups

Close All Subgroups

Select

Select All

Only Select Required

Clear All

* Required Variable

Optional Variable

© Combinations

? Examples

^ ☐ Insect, Pathogen, Disease

☐ Required

* DM_INS_PATH

☐ * DM_DATE © ? OR ☐ * DM_DATE_START © ? ☐ Both ⓘ

* DM_DATE_END ?

☐ Optional

☐ DM_SURF

☐ DM_SURF_MEAS_UNC

☐ DM_DATE_UNC ?

☐ DM_COMMENT

Download Custom CSV File

Submit completed CSV file at [Upload Data](#) using the BADM option (login required).

2 Customize BADM Group

Overview

Definitions & Units

Examples ?

Customize CSV

Customize and Download CSV for BADM Submission

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Open/Close

Open All Subgroups

Close All Subgroups

Select

Select All

Only Select Required

Clear All

* Required Variable

Optional Variable

© Combinations

? Examples

^ Insect, Pathogen, Disease

Required

✓ * DM_INS_PATH

• * DM_DATE © ? OR ○ * DM_DATE_START © ? ○ Both ⓘ
* DM_DATE_END ?

Optional

□ DM_SURF

□ DM_SURF_MEAS_UNC

□ DM_DATE_UNC ?

□ DM_COMMENT

Download Custom CSV File

Submit completed CSV file at [Upload Data](#) using the BADM option (login required).

2 Customize BADM Group

Tip: 💡 = See examples!

Overview

Definitions & Units

Examples 💡

Customize CSV

Customize and Download CSV for BADM Submission

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Open/Close

Open All Subgroups

Close All Subgroups

Select

Select All

Only Select Required

Clear All

* Required Variable

Optional Variable

© Combinations

💡 Examples

^ Insect, Pathogen, Disease

Required

✓ * DM_INS_PATH

• * DM_DATE © 💡 OR ○ * DM_DATE_START © 💡 ○ Both ⓘ
* DM_DATE_END 💡

Optional

□ DM_SURF

□ DM_SURF_MEAS_UNC

□ DM_DATE_UNC 💡

□ DM_COMMENT

Download Custom CSV File

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Tip: 💡 = See examples!

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Definitions & Units

Examples 💡

Customize CSV

BADM Examples

Choose a variable marked with 💡 to show examples of how to submit and interpret these BADM. See [BADM Basics](#) for more details.

Combinations of © variables must be unique. Read more: ⓘ.

* **Required Variable**
Optional Variable
© Combinations
💡 Examples

Insect, Pathogen, Disease

* **DM_INS_PATH**

DM_SURF

DM_SURF_MEAS_UNC

* **DM_DATE** © 💡

* **DM_DATE_START** © 💡

* **DM_DATE_END** 💡

DM_DATE_UNC 💡

DM_COMMENT

DATE Variables

Many groups have several DATE Variables that can be used to describe the time period that the metadata or ancillary data represents.

Dates should be entered at the precision known and most suitable to the observation. Supported precision include year, month, day, and minute in ISO format: YYYY, YYYYMM, YYYYMMDD, YYYYMMDDHHMM.

DATE or DATE_START / DATE_END

Either a single DATE or a DATE_START / DATE_END pair is required. Do not enter both for the same observation.

- Use DATE when the observation represents a single point in time. Typical resolutions used are a year, month, or day: YYYY, YYYYMM, YYYYMMDD.
- Use DATE_START / DATE_END when the observation represents a period of time. Start and end dates are often used when observations are collected as part of a campaign. Typically resolution is reported with day (YYYYMMDD), but month is also common (YYYYMM).

2 Customize BADM Group

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Customize CSV

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Open/Close

Open All Subgroups

Close All Subgroups

Select

Select All

Only Select Required

Clear All

* Required Variable

Optional Variable

© Combinations

? Examples

^ Insect, Pathogen, Disease

Required

✓ * DM_INS_PATH

☐ * DM_DATE © ? OR ☒ * DM_DATE_START © ? ☐ Both ⓘ
* DM_DATE_END ?

Optional

☐ DM_SURF

☐ DM_SURF_MEAS_UNC

☐ DM_DATE_UNC ?

☐ DM_COMMENT

Download Custom CSV File

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2 Customize BADM Group

Tip: Hover over variables for description and units

Overview

Definitions & Units

Examples ⓘ

Customize CSV

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Open/Close

Open All Subgroups

Close All Subgroups

Select

Select All

Only Select Required

Clear All

* Required Variable

Optional Variable

© Combinations

ⓘ Examples

^ Insect, Pathogen, Disease

Required

✓ * DM_INS_PATH

☐ * DM_DATE ⓘ ⓘ OR ☒ * DM_DATE_START ⓘ ⓘ ☐ Both ⓘ
* DM_DATE_END ⓘ

Optional

☐ DM_SURF

☐ DM_FOOTPRINT_MEAS_LIN

Percentage of the footprint area affected by the event | Units: %


☐ DM_DATE_UNC ⓘ

☐ DM_COMMENT

Download Custom CSV File

Submit completed CSV file at [Upload Data](#) using the BADM option (login required).

Download Customized CSV File

[Overview](#)[Definitions & Units](#)[Examples](#) [Customize CSV](#)

Customize and Download CSV for BADM Submission


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Open/Close[Open All Subgroups](#)[Close All Subgroups](#)**Select**[Select All](#)[Only Select Required](#)[Clear All](#)*** Required Variable**

Optional Variable

© Combinations

 Examples

^ Insect, Pathogen, Disease

 Required☒ * DM_INS_PATH

☐ * DM_DATE ©  OR ☒ * DM_DATE_START ©  ☐ Both 
* DM_DATE_END 

 Optional☒ DM_SURF☐ DM_SURF_MEAS_UNC☐ DM_DATE_UNC ☒ DM_COMMENT[Download Custom CSV File](#)

Submit completed CSV file at [Upload Data](#) using the BADM option (login required).

3

Download Customized CSV File

BADM-DisturbanceandManagement-DM_INS_PATH-v20210302.csv

SITE_ID,DM_INS_PATH,DM_DATE_START,DM_DATE_END,DM_SURF,DM_COMMENT
Required,Required,Required-a,Required,Optional,Optional
CC-sss,LIST(DM_INS_PATH),YYYYMMDDHHMM,YYYYMMDDHHMM,%,free text

Variables
Requirements
Units

4 Enter BADM into customized CSV

📄

💾

↶

↷

⌵

BADM-DisturbanceandManagement-DM_INS_PATH-v20210302

🔍

Search Sheet

😊

HomeInsertPage LayoutFormulasDataReviewView

B4

⌵

✖

✔

fx

	A	B	C	D	E	F
1	SITE_ID	DM_INS_PATH	DM_DATE_START	DM_DATE_END	DM_SURF	DM_COMMENT
2	Required	Required	Required-a	Required	Optional	Optional
3	CC-sss	LIST(DM_INS_PATH)	YYYYMMDDHHMM	YYYYMMDDHHMM	%	free text
4						
5						
6						
7						

⏪ ⏩

BADM-DisturbanceandManagement-D

+

Ready

🔍

📄

📑

⏪

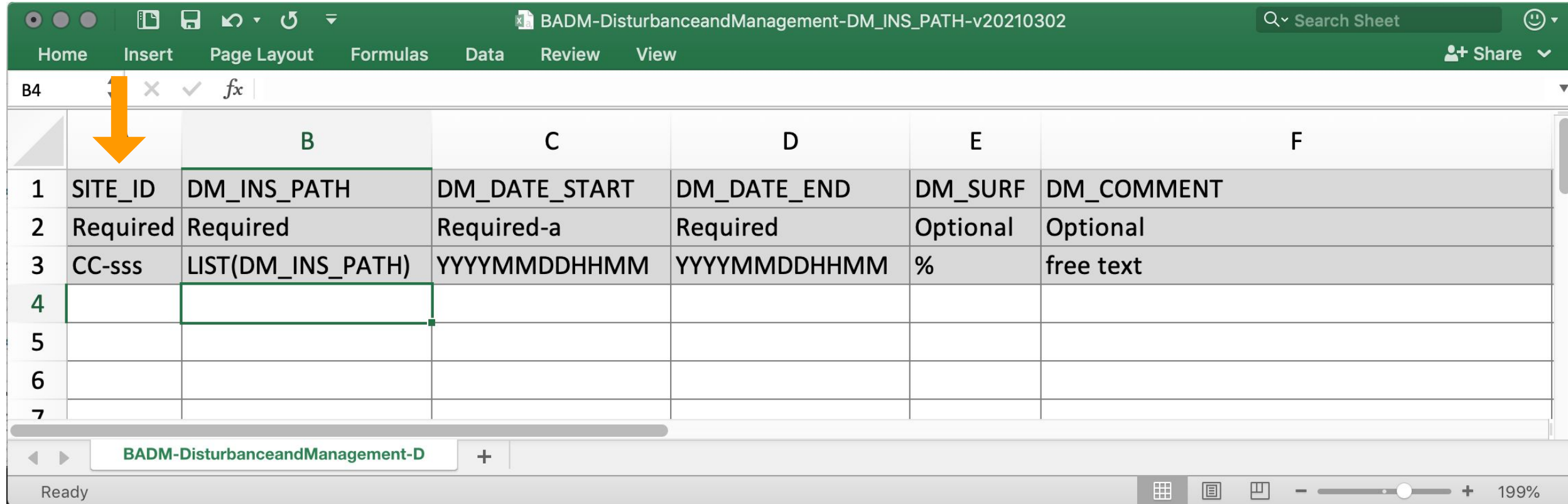
⏩

199%

4

Enter BADM into customized CSV

Enter Site ID in first column of every row of data.
Tip: Multiple sites can be entered in same file.

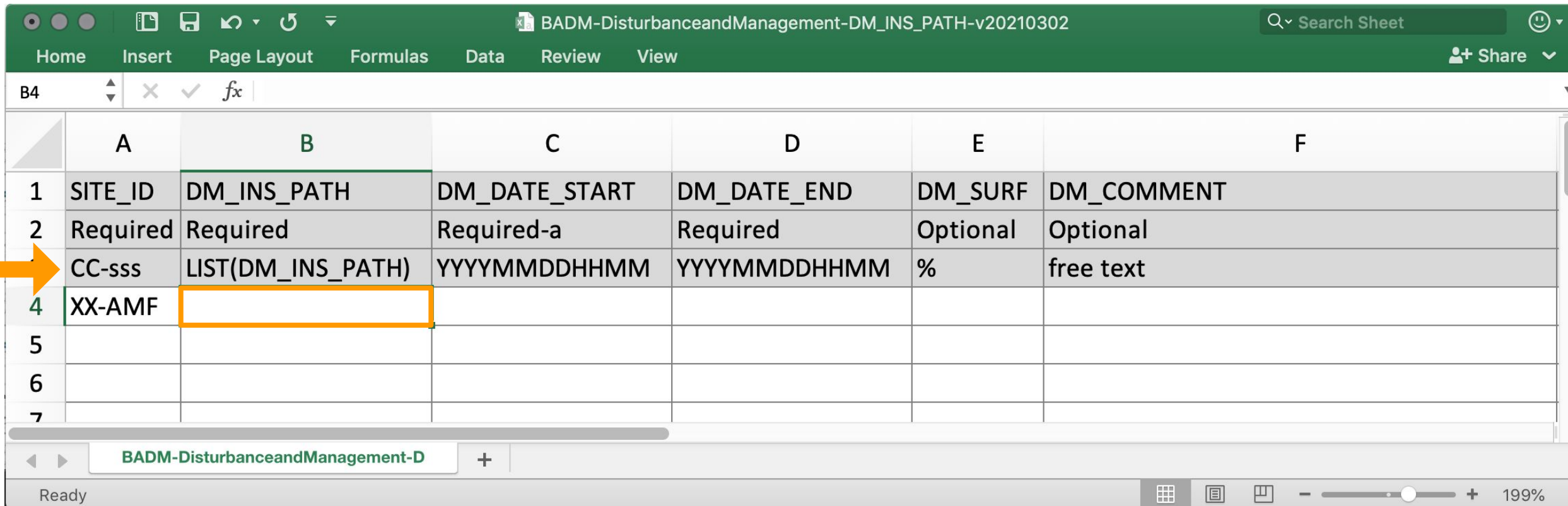


	A	B	C	D	E	F
1	SITE_ID	DM_INS_PATH	DM_DATE_START	DM_DATE_END	DM_SURF	DM_COMMENT
2	Required	Required	Required-a	Required	Optional	Optional
3	CC-sss	LIST(DM_INS_PATH)	YYYYMMDDHHMM	YYYYMMDDHHMM	%	free text
4						
5						
6						
7						

4

Enter BADM into customized CSV

Use specified units, including predefined lists.



	A	B	C	D	E	F
1	SITE_ID	DM_INS_PATH	DM_DATE_START	DM_DATE_END	DM_SURF	DM_COMMENT
2	Required	Required	Required-a	Required	Optional	Optional
3	CC-sss	LIST(DM_INS_PATH)	YYYYMMDDHHMM	YYYYMMDDHHMM	%	free text
4	XX-AMF					
5						
6						
7						

Enter BADM into customized CSV

[Overview](#)
[Definitions & Units](#)
[Examples !\[\]\(cbe80b694ebd74fcfe136a095b608235_img.jpg\)](#)
[Customize CSV](#)

BADM variables: Definitions, Units, Requirements

See Overview tab or [BADM Basics](#) for explanation of Required and Optional variables.


Multiple entries of this BADM group can be reported per site. However, combinations of © variables must be unique. Read more: [i](#)



[Show All LIST Options](#)
[Hide All LIST Options](#)

*** Required Variable**

Optional Variable

© Combinations

 Examples

Variable <i>Requirements</i>	Units	Description
* DM_INS_PATH <i>Required</i>	LIST(DM_INS_PATH) Show	Substantial insect, pathogen attack, or disease event
DM_SURF <i>Optional</i>	%	Percentage of the footprint area affected by the event
DM_SURF_MEAS_UNC <i>Optional</i>	%	Percentage of the footprint area affected by the event measurement uncertainty
* DM_DATE © <i>Required-a</i>	YYYYMMDDHHMM	Date of site disturbance  Please report the date at the precision known. Allowed reporting precision are YYYY, YYYYMMDD, and YYYYMMDDHHMM.
* DM_DATE_START © <i>Required-a</i>	YYYYMMDDHHMM	Start date of site disturbance  Please report the start date at the precision known. Allowed reporting precision are YYYY, YYYYMMDD, and YYYYMMDDHHMM.

Enter BADM into customized CSV

[Overview](#)[Definitions & Units](#)[Examples](#)[Customize CSV](#)

BADM variables: Definitions, Units, Requirements

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Multiple entries of this BADM group can be reported per site. However, combinations of © variables must be unique. Read more: [i](#)

[Show All LIST Options](#)[Hide All LIST Options](#)

*** Required Variable**

Optional Variable

© Combinations

💡 Examples

Variable	Units	Description
Requirements		
* DM_INS_PATH <i>Required</i>	LIST(DM_INS_PATH) Hide	Substantial insect, pathogen attack, or disease event
	DM_INS_PATH Options ×	
	<div>Option</div> <div>Disease</div> <div>Insect</div> <div>Pathogen</div> <div>Other</div>	<div>Description</div> <div></div> <div></div> <div></div> <div></div>
DM_SURF <i>Optional</i>	%	Percentage of the footprint area affected by the event

4 Enter BADM into customized CSV

The screenshot displays the Microsoft Excel interface with a green title bar. The file name is "BADM-DisturbanceandManagement-DM_INS_PATH-v20210302". The ribbon includes tabs for Home, Insert, Page Layout, Formulas, Data, Review, and View. A search bar is located in the top right corner. The active sheet is "BADM-DisturbanceandManagement-D". The data is organized in a table with columns A through F. Row 1 contains headers: SITE_ID, DM_INS_PATH, DM_DATE_START, DM_DATE_END, DM_SURF, and DM_COMMENT. Row 2 specifies requirements: Required, Required, Required-a, Required, Optional, and Optional. Row 3 defines data types: CC-sss, LIST(DM_INS_PATH), YYYYMMDDHHMM, YYYYMMDDHHMM, %, and free text. Row 4 provides an example entry: XX-AMF, Insect, 20170510, 20180720, 70, and Monthly assessment of trees in 8 plots in the. Rows 5, 6, and 7 are empty for additional data entry.

	A	B	C	D	E	F
1	SITE_ID	DM_INS_PATH	DM_DATE_START	DM_DATE_END	DM_SURF	DM_COMMENT
2	Required	Required	Required-a	Required	Optional	Optional
3	CC-sss	LIST(DM_INS_PATH)	YYYYMMDDHHMM	YYYYMMDDHHMM	%	free text
4	XX-AMF	Insect	20170510	20180720	70	Monthly assessment of trees in 8 plots in the
5						
6						
7						

5

Upload Data using BADM option

<https://ameriflux.lbl.gov/data/upload-data/>

Upload Data: BADM

[< Back](#)

To submit Ameriflux BADM file(s), please:

- Format your data following [BADM submission guidelines](#)
- Select options below and upload the file(s)

Select Site *

Pick from list

Filter by Site ID or Name

AR-TF1 — Rio Moat bog
AR-TF2 — Rio Pipo bog
BR-CMT — Capuaba farm Mato Grosso
BR-CST — Caatinga Serra Talhada
BR-Cui — Micrometeorological studies project
BR-Ma2 — Manaus - ZF2 K34
BR-Npw — Northern Pantanal Wetland
BR-PRS — Paraíso do Sul
BR-Sa1 — Santarem-Km67-Primary Forest
BR-Sa3 — Santarem-Km83-Logged Forest
CA-ARB — Attawapiskat River Bog
CA-ARB — Attawapiskat River Bog

Your Selection

Clear List

☐ I do not have a Site ID

Data File(s) to Upload * (200 MB size limit per file)

Add File(s)



Description *

Notes about this data upload. These notes help us process the data correctly.

By clicking Upload, I acknowledge that I have read and agreed to the [Ameriflux Data Policy](#).

Upload

Clear All Files

If you have questions, please contact us at ameriflux-support@lbl.gov. For more information see [About Data](#) and [How to Upload/Download Data](#).

Upload Data: BADM

[< Back](#)

To submit Ameriflux BADM file(s), please:

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Select Site *

Pick from list

Filter by Site ID or Name

AR-TF1 — Rio Moat bog
AR-TF2 — Rio Pipo bog
BR-CMT — Capuaba farm Mato Grosso
BR-CST — Caatinga Serra Talhada
BR-Cui — Micrometeorological studies project
BR-Ma2 — Manaus - ZF2 K34
BR-Npw — Northern Pantanal Wetland
BR-PRS — Paraíso do Sul

Your Selection

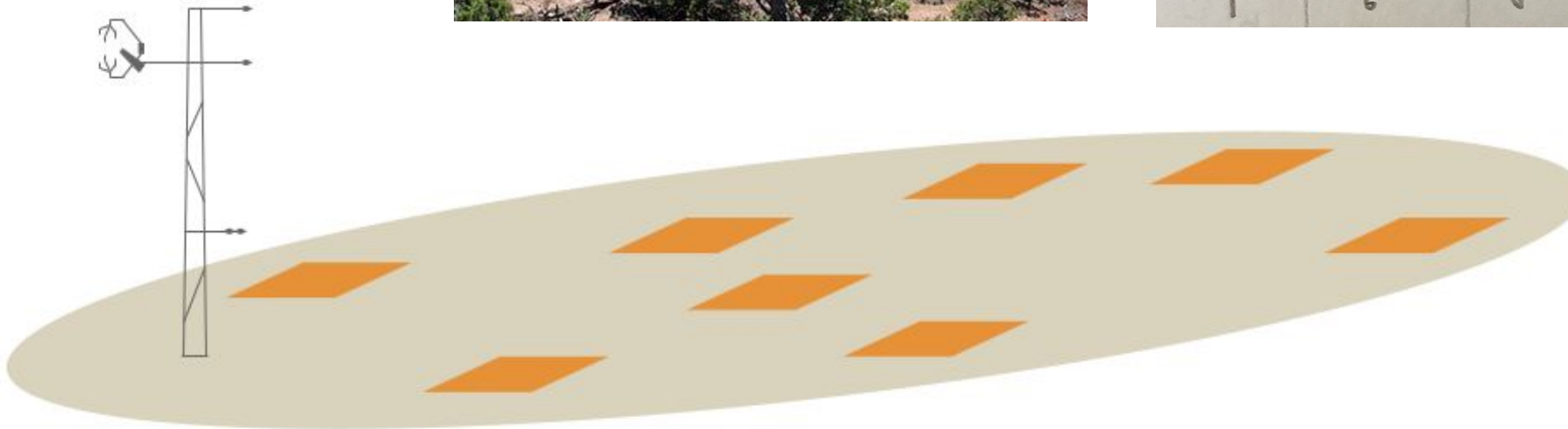
Clear List

Questions so far?

Canopy height... a more complex case



plot	tree	Spp	over story	height	date
1	27	PP	Y	5.6	01-JUN-18
1	3	J	Y	4.2	"
1	14	PP	Y	5.1	"
1	32	J	N	2.1	"
1	5	J	N	3.2	"
1	7	J	N	1.4	"
1	11	J	Y	3.7	"
1	21	J	Y	3.5	"
1	17	PP	N	1.1	"
1	6	J	Y	4.3	"



Annual surveys of trees
in 8 plots in footprint:

- 2015
- 2017-2018

Estimate from site PI:
2000, 2005, 2010, 2015

1 Select BADM Group

<https://ameriflux.lbl.gov/data/badm/badm-standards/>

- LOCATION (Geographic Location)
- IGBP (International Geosphere-Biosphere Programme)
- LAND_OWNERSHIP
- URL (Site Website)
- REFERENCE_PAPER (References)
- ACKNOWLEDGEMENT
- UTC_OFFSET
- CLIM_AVG (Average Climate)
- SITE_CHAR (Site Characteristics)
- DOM_DIST_MGMT (Dominant Disturbance and Management)
- TOWER_TYPE
- TOWER_POWER

Doi

- DOI (Digital Object Identifier)
- DOI_ORGANIZATION (DOI Organizations)
- DOI_CONTRIBUTOR (DOI Contributors)
- DOI_RELATED_DATA_DOI (Related DOI Information)

VegCover

- SPP (Species Cover)
- LAI (Leaf Area Index)
- HEIGHTC (Canopy Height)
- SA (Stand Age)
- DBH (Diameter at Breast Height)
- BASAL_AREA
- TREES_NUM (Number of Trees)
- ROOT_DEPTH
- PHEN_EVENT_TYPE (Phenological Events)



- DM_INS_PATH (Insect, Pathogen, Disease)
- DM_PESTICIDE (Pesticide Application)
- DM_PLANTING (Planting)
- DM_TILL (Tillage)
- DM_WATER (Water Management)
- DM_GENERAL (General Disturbance)

Instrument Ops

- INSTOM (Instrument Operations)

Soil

- SOIL_CHEM (Soil Chemical Concentration)
- SOIL_STOCK (Soil Chemical Stock)
- SOIL_TEX (Soil Texture)
- PFCURVE (Water Retention Curve)
- WTD (Water Table Depth)
- SWC (Soil Water Content)
- SOIL_WRB_GROUP (Soil World Reference Base Group)
- SOIL_ORDER
- SOIL_CLASSIFICATION
- SOIL_SERIES
- SOIL_DEPTH

2 Customize BADM Group

Overview

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BADM variables: Definitions, Units, Requirements

See Overview tab or [BADM Basics](#)

Multiple entries of this BADM group

Show All LIST Options

Hide All

Variable Requirements			
* HEIGHTC 1-Required	HEIGHTC_U_VEGTYPE © 2-Optional-b	LIST(VEGTYPE) Show	Understory canopy height vegetation type ? Use the predefined list to indicate the type of vegetation being described by the measurement (e.g., Grass, Evergreen Tree, Deciduous Tree, etc). If the measurement includes all vegetation present, do not enter a value. If vegetation type is not in predefined list, enter "Other/Not in list" and describe briefly in Approach. Do not use VEGTYPE if reporting SPP.
	* HEIGHTC_U_STATISTIC © 2-Required	LIST(STATISTIC) Show	Understory canopy height statistic ? The statistic for the measurement reported. Use predefined list (e.g., mean, min / max, standard deviation, etc).
	HEIGHTC_U_STATISTIC_METHOD © 2-Optional	LIST(STATISTIC_METHOD) Show	Understory canopy height statistic method ? Method used to generate the reported statistic (e.g., aggregate of individuals, aggregate of sample aggregates) from observations representing the same time period. Use predefined list. The aggregation method is not meant to describe temporal aggregations for example in calculations of higher frequency observations (e.g., sub-minute) to lower frequency observations (e.g., hourly) at a single location.
HEIGHTC_SPP © 1-Optional-a	HEIGHTC_U_STATISTIC_NUMBER 2-Optional	integer number	Number of observations used to determine understory canopy height statistic ? Number of observations (samples / replicates) used to calculate the STATISTIC for the reported measurement.
	HEIGHTC_APPROACH Optional	free text	Canopy height measurement approach
HEIGHTC_VEGTYPE © 1-Optional-a	** HEIGHTC_DATE © Required-c	YYYYMMDDHHMM	Canopy height measurement date ? Please report the date at the precision known. Allowed reporting precisions are YYYY, YYYYMM, YYYYMMDD, and YYYYMMDDHHMM. For measurements conducted during a campaign or for temporal averages, use DATE_START and DATE_END instead of DATE.
* HEIGHTC_STATISTIC © 1-Required	** HEIGHTC_DATE_START © Required-c	YYYYMMDDHHMM	Start date of canopy height measurement ? Start date of a measurement campaign or start date of a temporal average. Please report the date at the precision known. Allowed reporting precisions are YYYY, YYYYMM, YYYYMMDD, and YYYYMMDDHHMM. Do not use DATE_START if DATE is used.
HEIGHTC_STATISTIC_METHOD © 1-Optional	** HEIGHTC_DATE_END Required	YYYYMMDDHHMM	End date of canopy height measurement ? End date of a measurement campaign or end date of a temporal average. Please report the date at the precision known. Allowed reporting precisions are YYYY, YYYYMM, YYYYMMDD, and YYYYMMDDHHMM. Do not use DATE_END if DATE is used.

2 Customize BADM Group

Learn more: BADM subgroups
<https://ameriflux.lbl.gov/data/badm/badm-basics/>

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Customize CSV

Customize and Download CSV for BADM Submission

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Open/Close

Open All Subgroups

Close All Subgroups

Select

Select All

Only Select Required

Clear All

* Required Variable

** Applies to All

Optional Variable

© Combinations

? Examples

^ ☐ Canopy Height

☐ Required

* HEIGHTC ?

* HEIGHTC_STATISTIC © ?

☐ Optional

☐ HEIGHTC_SPP © ? OR ☐ HEIGHTC_VEGTYPE © ? ☐ Both ⓘ ☐ Neither

☐ HEIGHTC_STATISTIC_METHOD © ?

☐ HEIGHTC_STATISTIC_NUMBER ?

^ ☐ Understory Height

☐ Required

* HEIGHTC_U

* HEIGHTC_U_STATISTIC © ?

☐ Optional

☐ HEIGHTC_U_SPP © ? OR ☐ HEIGHTC_U_VEGTYPE © ? ☐ Both ⓘ ☐ Neither

☐ HEIGHTC_U_STATISTIC_METHOD © ?

☐ HEIGHTC_U_STATISTIC_NUMBER ?

^ ☐ Applies to All

Required

☐ ** HEIGHTC_DATE © ? OR ☐ ** HEIGHTC_DATE_START © ? ☐ Both ⓘ

** HEIGHTC_DATE_END ?

☐ Optional

☐ HEIGHTC_APPROACH

☐ HEIGHTC_DATE_UNC ?

☐ HEIGHTC_COMMENT

2 Customize BADM Group

Tip: 💡 = See examples!

Overview

Definitions & Units

Examples 💡

Customize CSV

BADM Examples

Choose a variable marked with 💡 to show examples of how to submit and interpret these BADM. See [BADM Basics](#) for more details.

Combinations of © variables must be unique. Read more: ⓘ.

* Required Variable
** Applies to All
Optional Variable
© Combinations
💡 Examples

Canopy Height

* HEIGHTC 💡

HEIGHTC_SPP © 💡

HEIGHTC_VEGTYPE © 💡

* HEIGHTC_STATISTIC © 💡

HEIGHTC_STATISTIC_METHOD © 💡

HEIGHTC_STATISTIC_NUMBER 💡

Understory Height

* HEIGHTC_U

HEIGHTC_U_SPP © 💡

HEIGHTC_U_VEGTYPE © 💡

* HEIGHTC_U_STATISTIC © 💡

HEIGHTC_U_STATISTIC_METHOD © 💡

HEIGHTC_U_STATISTIC_NUMBER 💡

Applies to All

HEIGHTC_APPROACH

** HEIGHTC_DATE © 💡

** HEIGHTC_DATE_START © 💡

** HEIGHTC_DATE_END 💡

HEIGHTC_DATE UNC 💡

HEIGHTC_COMMENT

HEIGHTC

Canopy height is important ancillary data that facilitates interpretation of flux observations.

HEIGHTC should represent the vegetation height as if a cloth was draped over the site.



BADM supports overstory and understory canopy heights for sites, like forests, that have distinct vegetation canopies.

Use HEIGHTC for overstory canopy height. Include trees seen from top-down view.

Overview

Definitions & Units

Examples 💡

Customize CSV

BADM Examples

Choose a variable marked with 💡 to show examples of how to submit and interpret these BADM. See [BADM Basics](#) for more details.

Combinations of © variables must be unique. Read more: ⓘ.

* Required Variable
 ** Applies to All
 Optional Variable
 © Combinations
 💡 Examples

Canopy Height

* HEIGHTC 💡

HEIGHTC_SPP © 💡

HEIGHTC_VEGTYPE © 💡

* HEIGHTC_STATISTIC © 💡

HEIGHTC_STATISTIC_METHOD © 💡

HEIGHTC_STATISTIC_NUMBER 💡

Understory Height

* HEIGHTC_U

HEIGHTC_U_SPP © 💡

HEIGHTC_U_VEGTYPE © 💡

* HEIGHTC_U_STATISTIC © 💡

HEIGHTC_U_STATISTIC_METHOD © 💡

HEIGHTC_U_STATISTIC_NUMBER 💡

Applies to All

HEIGHTC_APPROACH

** HEIGHTC_DATE © 💡

** HEIGHTC_DATE_START © 💡

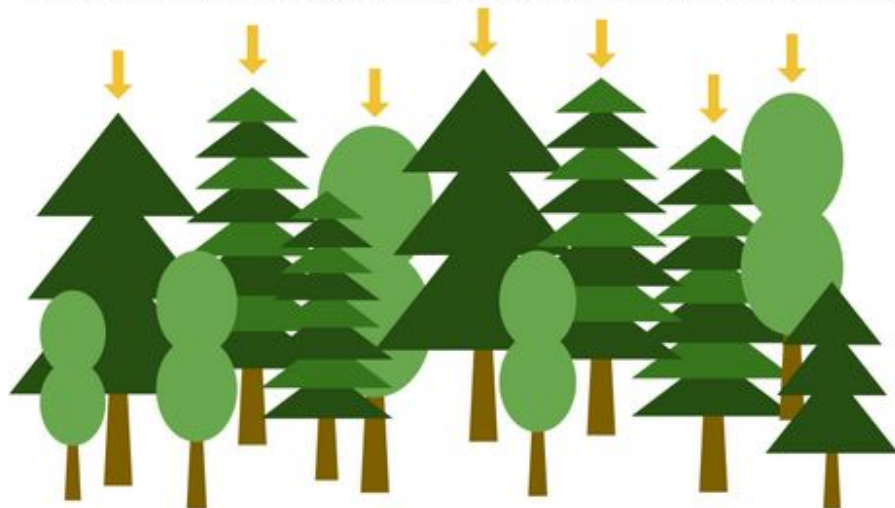
** HEIGHTC_DATE_END 💡

HEIGHTC_DATE_UNC 💡

HEIGHTC_COMMENT

BADM supports overstory and understory canopy heights for sites, like forests, that have distinct vegetation canopies.

Use HEIGHTC for overstory canopy height. Include trees seen from top-down view.



Sites without distinct canopies should also use HEIGHTC

2 Customize BADM Group

Overview

Definitions & Units

Examples ?

Customize CSV

Customize and Download CSV for BADM Submission

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Open/Close

Open All Subgroups

Close All Subgroups

Select

Select All

Only Select Required

Clear All

* Required Variable

** Applies to All

Optional Variable

© Combinations

? Examples

^ [x] Canopy Height

☒ Required

☒ * HEIGHTC ?

☒ * HEIGHTC_STATISTIC © ?

☒ Optional

☐ HEIGHTC_SPP © ?

 OR

☐ HEIGHTC_VEGTYPE © ?

☒ Both ⓘ ⓘ

☐ Neither

☒ HEIGHTC_STATISTIC_METHOD © ?

☒ HEIGHTC_STATISTIC_NUMBER ?

^ [] Understory Height

☐ Required

☐ * HEIGHTC_U

☐ * HEIGHTC_U_STATISTIC © ?

☐ Optional

☐ HEIGHTC_U_SPP © ?

 OR

☐ HEIGHTC_U_VEGTYPE © ?

☐ Both ⓘ

☐ Neither

☐ HEIGHTC_U_STATISTIC_METHOD © ?

☐ HEIGHTC_U_STATISTIC_NUMBER ?

^ [x] Applies to All

Required

☒ ** HEIGHTC_DATE © ?

 OR

☐ ** HEIGHTC_DATE_START © ?

☐ Both ⓘ

☐ ** HEIGHTC_DATE_END ?

☐ Optional

☐ HEIGHTC_APPROACH

☐ HEIGHTC_DATE_UNC ?

☐ HEIGHTC_COMMENT

2 Customize BADM Group

Learn more: Mutually-exclusive variables
<https://ameriflux.lbl.gov/data/badm/badm-basics/>

Open/Close

Open All Subgroups

Close All Subgroups

Select

Select All

Only Select Required

Clear All

Optional Variable

Combinations

Examples

Canopy Height

Required

HEIGHTC

HEIGHTC_STATISTIC

Optional

HEIGHTC_SPP

HEIGHTC_VEGTYPE

Both

Neither

HEIGHTC_STATISTIC

HEIGHTC_STATISTIC

Understory Height

Required

HEIGHTC_U

HEIGHTC_U_STATISTIC

Optional

HEIGHTC_U_SPP

HEIGHTC_U_STATISTIC

HEIGHTC_U_STATISTIC

Applies to All

Required

HEIGHTC_DATE

HEIGHTC_DATE_START

Both

HEIGHTC_DATE_END

Download Custom CSV File

Submit completed CSV file at Upload Data using the BADM option

Optional, Mutually-Exclusive Variables

If reporting, only enter one mutually-exclusive variable per row (group entry).

Mutually-exclusive variables with letter suffix (e.g., "-a") can be included in the CSV file, but only one variable per row can be reported.

Leave blank if observation is for entire site AND variables are optional.

Otherwise, use one row per variables.

Do not enter both mutually-exclusive variables in the same row.

Watch for matching suffixes (e.g., "-a").

HEIGHTC	HEIGHTC_SPP	HEIGHTC_VEGTYPE	
1-Required	1-Optional-a	1-Optional-a	
m	Scientific name	LIST(VEGTYPE)	
34.2			✓
40.7	Ables magnifica		✓
35.6		Evergreen Tree	✓
40.7	Ables magnifica	Evergreen Tree	✗

2 Customize BADM Group

Tip: Do not use SPP or VEGTYPE if observation characterizes entire site.

Overview

Definitions & Units

Examples ⓘ

Customize CSV

BADM Examples

Choose a variable marked with ⓘ to show examples of how to submit and interpret these BADM. See [BADM Basics](#) for more details.

Combinations of © variables must be unique. Read more: ⓘ.

* Required Variable
** Applies to All
Optional Variable
© Combinations
ⓘ Examples

Canopy Height

* HEIGHTC ⓘ

HEIGHTC_SPP © ⓘ

HEIGHTC_VEGTYPE © ⓘ

* HEIGHTC_STATISTIC © ⓘ

HEIGHTC_STATISTIC_METHOD © ⓘ

HEIGHTC_STATISTIC_NUMBER ⓘ

Understory Height

* HEIGHTC_U ⓘ

HEIGHTC_U_SPP © ⓘ

HEIGHTC_U_VEGTYPE © ⓘ

* HEIGHTC_U_STATISTIC © ⓘ

HEIGHTC_U_STATISTIC_METHOD © ⓘ

HEIGHTC_U_STATISTIC_NUMBER ⓘ

Applies to All

HEIGHTC_APPROACH

** HEIGHTC_DATE © ⓘ

** HEIGHTC_DATE_START © ⓘ

** HEIGHTC_DATE_END ⓘ

HEIGHTC_DATE_UNC ⓘ

HEIGHTC_COMMENT

SPP and VEGTYPE Variables

Many BADM subgroups and groups have SPP and VEGTYPE variables, like DBH_SPP and DBH_VEGTYPE.

❗ Do not enter values for SPP and VEGTYPE variables together for the same observation, i.e., in the same row of your CSV file. SPP and VEGTYPE are mutually exclusive, optional variables. Read more at [BADM Basics](#).

If an observations characterizes the site and is not specific to a single species or to a particular vegetation type, do not enter values for SPP or VEGTYPE:

Observation is for entire site: **do not use** SPP or VEGTYPE



2 Customize BADM Group

Tip: Use SPP or VEGTYPE only if observation characterizes specific species or vegetation type.

! Do not use both at same time!

Canopy Height

* HEIGHTC ?

HEIGHTC_SPP © ?

HEIGHTC_VEGTYPE © ?

* HEIGHTC_STATISTIC © ?

HEIGHTC_STATISTIC_METHOD © ?

HEIGHTC_STATISTIC_NUMBER ?

Understory Height

* HEIGHTC_U

HEIGHTC_U_SPP © ?

HEIGHTC_U_VEGTYPE © ?

* HEIGHTC_U_STATISTIC © ?

HEIGHTC_U_STATISTIC_METHOD © ?

HEIGHTC_U_STATISTIC_NUMBER ?

Applies to All

HEIGHTC_APPROACH

** HEIGHTC_DATE © ?

** HEIGHTC_DATE_START © ?

** HEIGHTC_DATE_END ?

HEIGHTC_DATE_UNC ?

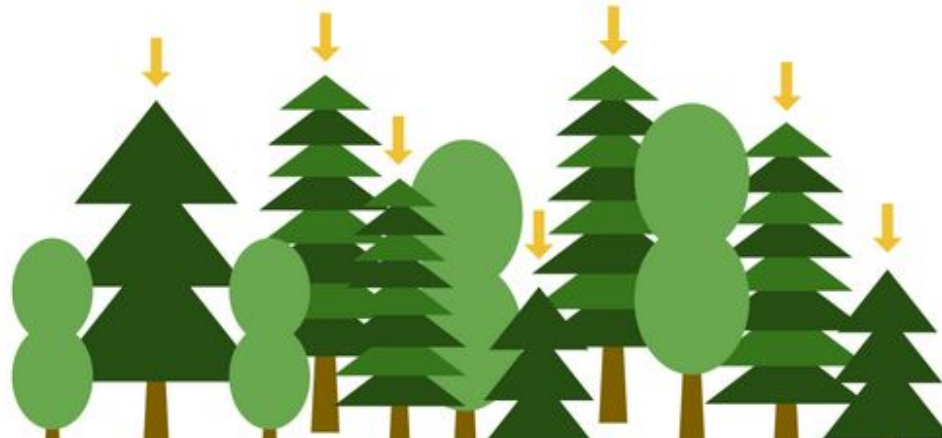
HEIGHTC_COMMENT

However, if the observation characterizes a single species or a particular vegetation type, use SPP or VEGTYPE in the example below. Do not use both at the same time!

Observation is for specific species: use SPP



Observation is for specific vegetation type: use VEGTYPE



2 Customize BADM Group

Overview

Definitions & Units

Examples ?

Customize CSV

Customize and Download CSV for BADM Submission

Select variables from one or more subgroups to form a complete group. At a minimum, the required variables from the "Applies to All" subgroup must be included in every group. After selecting your desired variables, download the customized CSV file for submission of BADM. For additional submission details, see [BADM Submission Instructions](#).

Multiple entries of this BADM group can be reported per site. However, combinations of © variables must be unique. Read more: ⓘ. See [BADM Basics](#) for more details.

Open/Close

Open All Subgroups

Close All Subgroups

Select

Select All

Only Select Required

Clear All

* Required Variable

** Applies to All

Optional Variable

© Combinations

? Examples

Canopy Height

☒ Required

☒ * HEIGHTC ?

☒ * HEIGHTC_STATISTIC © ?

☒ Optional

HEIGHTC_SPP © ? OR HEIGHTC_VEGTYPE © ? Both ⓘ Neither ⓘ

☒ HEIGHTC_STATISTIC_METHOD © ?

☒ HEIGHTC_STATISTIC_NUMBER ?

Understory Height

☐ Required

☐ * HEIGHTC_U

☐ * HEIGHTC_U_STATISTIC © ?

☐ Optional

HEIGHTC_U_SPP © ? OR HEIGHTC_U_VEGTYPE © ? Both ⓘ Neither

☐ HEIGHTC_U_STATISTIC_METHOD © ?

☐ HEIGHTC_U_STATISTIC_NUMBER ?

Applies to All

Required

☒ ** HEIGHTC_DATE © ? OR ☐ ** HEIGHTC_DATE_START © ? ☐ Both ⓘ

☒ ** HEIGHTC_DATE_END ?

Optional

☐ HEIGHTC_APPROACH

☐ HEIGHTC_DATE_UNC ?

☐ HEIGHTC_COMMENT

2 Customize BADM Group

Overview

Definitions & Units

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Customize CSV

Customize and Download CSV for BADM Submission

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Open/Close

Open All Subgroups

Close All Subgroups

Select

Select All

Only Select Required

Clear All

* Required Variable

** Applies to All

Optional Variable

© Combinations

? Examples

^ Canopy Height

☒ Required

☒ * HEIGHTC ?

☒ * HEIGHTC_STATISTIC © ?

☒ Optional

HEIGHTC_SPP © ? OR HEIGHTC_VEGTYPE © ? Both ⓘ Neither

☒ HEIGHTC_STATISTIC_METHOD © ?

☒ HEIGHTC_STATISTIC_NUMBER ?

^ Understory Height

☐ Required

☐ * HEIGHTC_U

☐ * HEIGHTC_U_STATISTIC © ?

☐ Optional

HEIGHTC_U_SPP © ? OR HEIGHTC_U_VEGTYPE © ? Both ⓘ Neither

☐ HEIGHTC_U_STATISTIC_METHOD © ?

☐ HEIGHTC_U_STATISTIC_NUMBER ?

^ Applies to All

Required

☒ ** HEIGHTC_DATE © ? OR ☐ ** HEIGHTC_DATE_START © ? ☐ Both ⓘ

☐ ** HEIGHTC_DATE_END ?

Optional

☒ HEIGHTC_APPROACH

☐ HEIGHTC_DATE_UNC ?

☐ HEIGHTC_COMMENT

3

Download Customized CSV File

must be included in every group. After selecting your desired variables, download the customized CSV file for submission of BADM. For additional submission details, see [BADM Submission Instructions](#).

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Open/Close

Open All Subgroups

Close All Subgroups

Select

Select All

Only Select Required

Clear All

* Required Variable
** Applies to All
Optional Variable
© Combinations
ⓘ Examples

Canopy Height

☒ Required

✓ * HEIGHTC ⓘ

✓ * HEIGHTC_STATISTIC © ⓘ

☒ Optional

☐ HEIGHTC_SPP © ⓘ OR ☐ HEIGHTC_VEGTYPE © ⓘ ☐ Both ⓘ ☒ Neither

☒ HEIGHTC_STATISTIC_METHOD © ⓘ

☒ HEIGHTC_STATISTIC_NUMBER ⓘ

Understory Height

☐ Required

* HEIGHTC_U ⓘ

* HEIGHTC_U_STATISTIC © ⓘ

☐ Optional

☐ HEIGHTC_U_SPP © ⓘ OR ☐ HEIGHTC_U_VEGTYPE © ⓘ ☐ Both ⓘ ☐ Neither

☐ HEIGHTC_U_STATISTIC_METHOD © ⓘ

☐ HEIGHTC_U_STATISTIC_NUMBER ⓘ

Applies to All

Required

☒ ** HEIGHTC_DATE © ⓘ OR ☐ ** HEIGHTC_DATE_START © ⓘ ☐ Both ⓘ

** HEIGHTC_DATE_END ⓘ

☒ Optional

☒ HEIGHTC_APPROACH

☐ HEIGHTC_DATE_UNC ⓘ

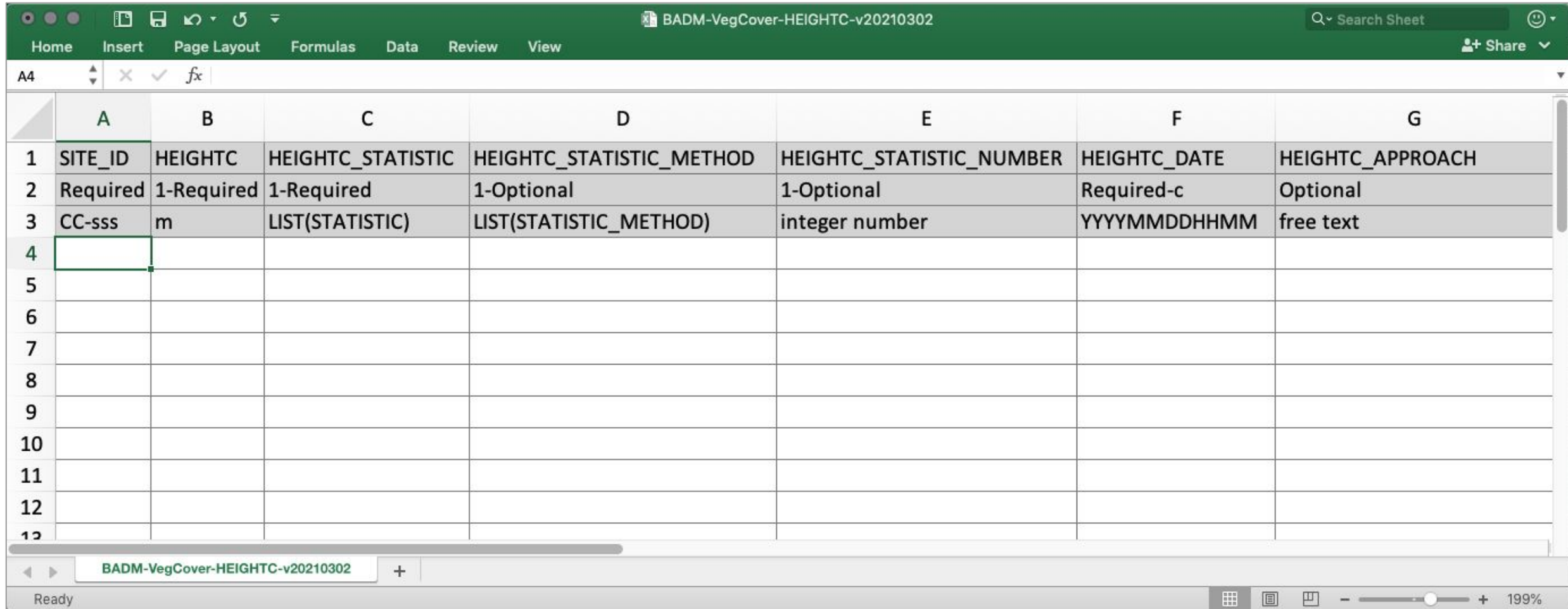
☐ HEIGHTC_COMMENT

Download Custom CSV File



Submit completed CSV file at [Upload Data](#) using the BADM option (login required).

4 Enter BADM into customized CSV



	A	B	C	D	E	F	G
1	SITE_ID	HEIGHTC	HEIGHTC_STATISTIC	HEIGHTC_STATISTIC_METHOD	HEIGHTC_STATISTIC_NUMBER	HEIGHTC_DATE	HEIGHTC_APPROACH
2	Required	1-Required	1-Required	1-Optional	1-Optional	Required-c	Optional
3	CC-sss	m	LIST(STATISTIC)	LIST(STATISTIC_METHOD)	integer number	YYYYMMDDHHMM	free text
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							

4 Enter BADM into customized CSV

BADM-VegCover-HEIGHTC-v20210302							
Home Insert Page Layout Formulas Data Review View							
A4							
	A	B	C	D	E	F	G
1	SITE_ID	HEIGHTC	HEIGHTC_STATISTIC	HEIGHTC_STATISTIC_METHOD	HEIGHTC_STATISTIC_NUMBER	HEIGHTC_DATE	HEIGHTC_APPROACH
2	Required	1-Required	1-Required	1-Optional	1-Optional	Required-c	Optional
3	CC-sss	m	LIST(STATISTIC)	LIST(STATISTIC_METHOD)	integer number	YYYYMMDDHHMM	free text
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							

plot	tree	SPP	over story	height	date
1	27	PP	Y	5.6	01-JUN-18
1	3	J	Y	4.2	"
1	14	PP	Y	5.1	"
1	32	J	N	2.1	"
1	5	J	N	3.2	"
1	7	J	N	1.4	"
1	11	J	Y	3.7	"
1	21	J	Y	3.5	"
1	17	PP	N	1.1	"
1	6	J	Y	4.3	"

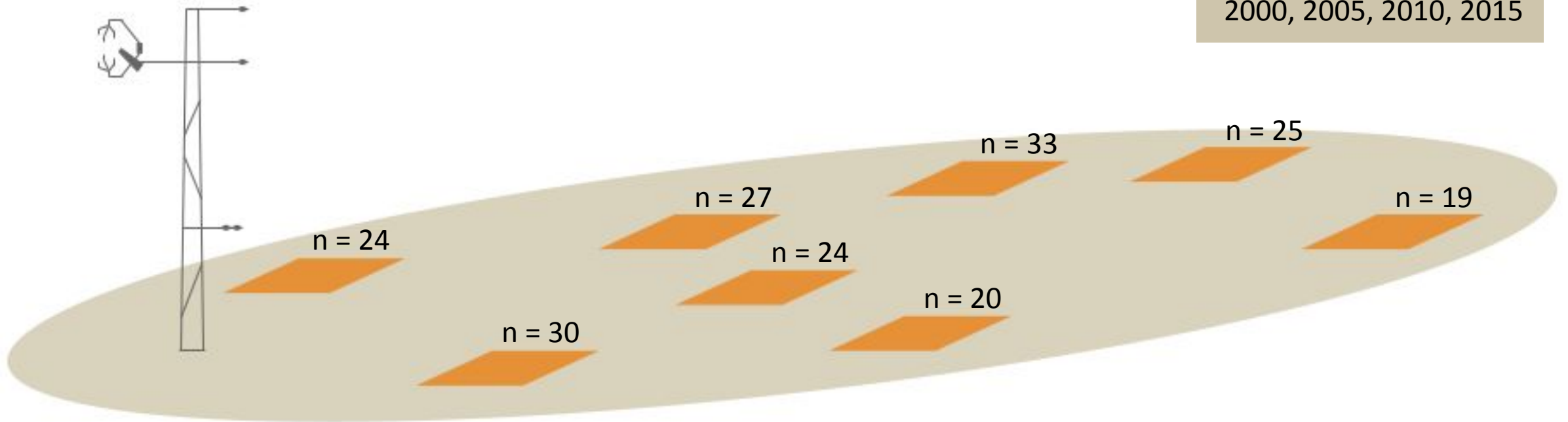
???

4 Enter BADM into customized CSV

Annual surveys of trees
in 8 plots in footprint:

- 2015
- 2017-2018

Estimate from site PI:
2000, 2005, 2010, 2015



Enter BADM into customized CSV

Show All LIST Options

Hide All LIST Options


Optional variable

Combinations

Examples

Variable Requirements	Units	Description								
* HEIGHTC 1-Required	m	Canopy height ⓘ Height of the canopy. In a forest ecosystem, canopy height is the distribution of overstory trees that see light at the top of the canopy. Forest understory canopy height is reported in HEIGHTC_U. If overstory / understory distinction is necessary for non-forest ecosystems, describe details in Approach.								
HEIGHTC_SPP © 1-Optional-a	Scientific name	Canopy height species (taxa) ⓘ Vegetation species being described by the measurement. To enter a plant species, use the scientific name (Genus species Author or Genus Author). Please refer to www.theplantlist.org for current scientific names and authors. If the measurement includes all vegetation present, do not enter a value. Do not use SPP if reporting VEGTYPE.								
HEIGHTC_VEGTYPE © 1-Optional-a	LIST(VEGTYPE) Show	Canopy height vegetation type ⓘ Use the predefined list to indicate the type of vegetation being described by the measurement (e.g., Grass, Evergreen Tree, Deciduous Tree, etc). If the measurement includes all vegetation present, do not enter a value. If vegetation type is not in predefined list, enter "Other/Not in list" and describe briefly in Approach. Do not use VEGTYPE if reporting SPP.								
* HEIGHTC_STATISTIC © 1-Required	LIST(STATISTIC) Hide	Canopy height statistic ⓘ The statistic for the measurement reported. Use predefined list (e.g., mean, min / max, standard deviation, etc).								
<div>STATISTIC Options ×</div> <table> <tr> <th>Option</th><th>Description</th></tr> <tr> <td>Mean</td><td>Average (mean) value of sample population</td></tr> <tr> <td>Standard Deviation</td><td>Standard deviation may be reported from a sample population that consists of individual or aggregated samples (observations). If the distinction is important, specify in STATISTIC_METHOD or Comments.</td></tr> <tr> <td>Minimum</td><td>Minimum value</td></tr> </table>			Option	Description	Mean	Average (mean) value of sample population	Standard Deviation	Standard deviation may be reported from a sample population that consists of individual or aggregated samples (observations). If the distinction is important, specify in STATISTIC_METHOD or Comments.	Minimum	Minimum value
Option	Description									
Mean	Average (mean) value of sample population									
Standard Deviation	Standard deviation may be reported from a sample population that consists of individual or aggregated samples (observations). If the distinction is important, specify in STATISTIC_METHOD or Comments.									
Minimum	Minimum value									
HEIGHTC_STATISTIC_METHOD © 1-Optional	LIST(STATISTIC_METHOD) Show	Canopy height statistic method ⓘ Method used to generate the reported statistic (e.g., aggregate of individuals, aggregate of sample aggregates) from observations representing the same time period. Use predefined list. The aggregation method is not								

Enter BADM into customized CSV

Tip:  = See examples!


Canopy Height

* HEIGHTC

HEIGHTC_SPP 

HEIGHTC_VEGTYPE 

* HEIGHTC_STATISTIC


HEIGHTC_STATISTIC_METHOD 

HEIGHTC_STATISTIC_NUMBER 

Understory Height

* HEIGHTC_U

HEIGHTC_U_SPP 

HEIGHTC_U_VEGTYPE 

* HEIGHTC_U_STATISTIC

HEIGHTC_U_STATISTIC_METHOD 

HEIGHTC_U_STATISTIC_NUMBER 

Applies to All

HEIGHTC_APPROACH

** HEIGHTC_DATE 

** HEIGHTC_DATE_START 

** HEIGHTC_DATE_END 

HEIGHTC_DATE_UNC 

HEIGHTC_COMMENT

var_STATISTIC

Required

The type of value reported.

Options:

Mean, Minimum, Maximum, Percentiles

Standard Deviation, Measurement Uncertainty

Single observation

var_STATISTIC_METHOD

Optional

The method of aggregation used to generate the statistic.

Options:

Aggregate of individual observations

The statistic is aggregated from individual observations located within the site. Observations may be grouped into sample areas (e.g., plots) within the site but those groupings are ignored.

Statistics generated by this approach may represent spatial characteristics of the measurement within the site (e.g., spatial heterogeneity) and/or characteristics due to other factors (e.g., population variability).

Aggregate of sample aggregates

The statistic is aggregated from aggregated individual observations located in sample areas within the site. For example, individual observations are made in 5 sample plots within a site. "Aggregate of sample aggregates" is used if a plot statistic (e.g., Mean) is first calculated, and then the plot values are aggregated to calculate the site statistic.

Statistics generated by this approach are often used to highlight the spatial characteristics within the site (i.e., the spatial heterogeneity of measurement within the site).

Expert estimate

Estimate made by expert familiar with site

See the [Examples](#) for more details.

var_STATISTIC_NUMBER

Optional

The number of observations used in calculating the statistic.

Enter BADM into customized CSV

Tip: 💡 = See examples!

Canopy Height

* HEIGHTC 💡

HEIGHTC_SPP ©💡

HEIGHTC_VEGTYPE ©💡

* HEIGHTC_STATISTIC ©💡

HEIGHTC_STATISTIC_METHOD ©💡

HEIGHTC_STATISTIC_NUMBER 💡

Understory Height

* HEIGHTC_U

HEIGHTC_U_SPP ©💡

HEIGHTC_U_VEGTYPE ©💡

* HEIGHTC_U_STATISTIC ©💡

HEIGHTC_U_STATISTIC_METHOD ©💡

HEIGHTC_U_STATISTIC_NUMBER 💡

Applies to All

HEIGHTC_APPROACH

** HEIGHTC_DATE ©💡

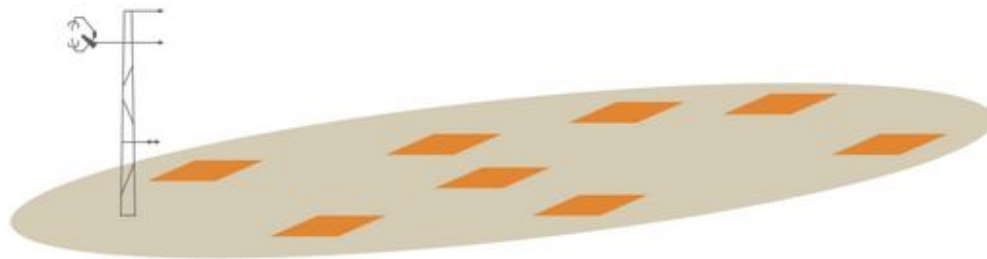
** HEIGHTC_DATE_START ©💡

** HEIGHTC_DATE_END 💡

HEIGHTC_DATE_UNC 💡

HEIGHTC_COMMENT

Example 2: DBH calculated from 8 plots



For DBH observations of individual trees in 8 sample plots at the site:

If the individual DBH observations are first aggregated at the plot level and then the plot values are used to calculate the site-level STATISTICS to highlight spatial variability:

STATISTIC* = Mean, Minimum, Maximum, or Standard Deviation

STATISTIC_METHOD = Aggregate of sample aggregates

STATISTIC_NUMBER = 8

If the individual DBH observations are aggregated across all plots to calculate the site-level STATISTIC:

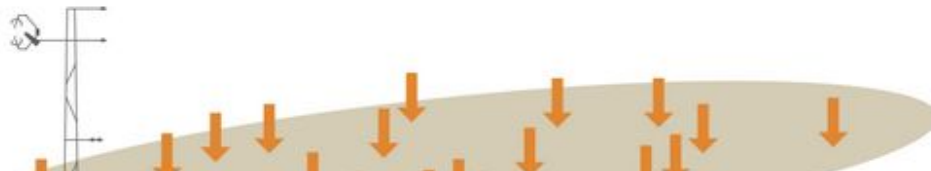
STATISTIC* = Mean, Minimum, Maximum, Percentiles, or Standard Deviation

STATISTIC_METHOD = Aggregate of individual observations

STATISTIC_NUMBER = # of individual samples

* Minimum, Maximum, and Percentiles should only be calculated if the sample size is adequately large.

Example 3: DBH calculated from randomly selected trees within the site



4

Enter BADM into customized CSV

BADM-VegCover-HEIGHTC-v20210302							
Home Insert Page Layout Formulas Data Review View							
G11							
	A	B	C	D	E	F	G
1	SITE_ID	HEIGHTC	HEIGHTC_STATISTIC	HEIGHTC_STATISTIC_METHOD	HEIGHTC_STATISTIC_NUMBER	HEIGHTC_DATE	HEIGHTC_APPROACH
2	Required	1-Required	1-Required	1-Optional	1-Optional	Required-c	Optional
3	CC-sss	m	LIST(STATISTIC)	LIST(STATISTIC_METHOD)	integer number	YYYYMMDDHHMM	free text
4	XX-AMF	3.7	Mean	Aggregate of individual observat	202	2015	Trees sampled from 8 plots
5	XX-AMF	4.1	Mean	Aggregate of individual observat	202	2017	Trees sampled from 8 plots
6	XX-AMF	4.0	Mean	Aggregate of individual observat	202	2018	Trees sampled from 8 plots
7	XX-AMF	3	Mean	Expert estimate		2000	PI estimate
8	XX-AMF	3	Mean	Expert estimate		2005	PI estimate
9	XX-AMF	3.5	Mean	Expert estimate		2010	PI estimate
10	XX-AMF	4	Mean	Expert estimate		2015	PI estimate
11							
12							
13							

BADM-VegCover-HEIGHTC-v20210302

Ready 199%

4

Enter BADM into customized CSV

BADM are designed for site-level characterization.
Check combinations of © variables

BADM-VegCover-HEIGHTC-v20210302							
	A	B	C	D	E	F	G
1	SITE_ID	HEIGHTC	HEIGHTC_STATISTIC	HEIGHTC_STATISTIC_METHOD	HEIGHTC_STATISTIC_NUMBER	HEIGHTC_DATE	HEIGHTC_APPROACH
2	Required	1-Required	1-Required	1-Optional	1-Optional	Required-c	Optional
3	CC-sss	m	LIST(STATISTIC)	LIST(STATISTIC_METHOD)	integer number	YYYYMMDDHHMM	free text
4	XX-AMF	3.7	Mean	Aggregate of individual observat	202	2015	Trees sampled from 8 plots
5	XX-AMF	4.1	Mean	Aggregate of individual observat	202	2017	Trees sampled from 8 plots
6	XX-AMF	4.0	Mean	Aggregate of individual observat	202	2018	Trees sampled from 8 plots
7	XX-AMF	3	Mean	Expert estimate		2000	PI estimate
8	XX-AMF	3	Mean	Expert estimate		2005	PI estimate
9	XX-AMF	3.5	Mean	Expert estimate		2010	PI estimate
10	XX-AMF	4	Mean	Expert estimate		2015	PI estimate
11							
12							
13							

Enter BADM into customized CSV

Learn more: Combinations of © variables
<https://ameriflux.lbl.gov/data/badm/badm-basics/>

must be included in every group. After selecting your desired variables, download the customized CSV file for submission details, see [BADM Submission Instructions](#).

Multiple entries of this BADM group can be reported per site. However, combinations of © variables must be unique. Read more: [See BADM Basics](#) for more details.

Open/Close

Open All Subgroups

Close All Subgroups

Select

Select All

Only Select Required

Clear All

Canopy Height

☒ Required

☒ * HEIGHTC

☒ * HEIGHTC_STATISTIC ©

☐ Optional

☐ HEIGHTC_SPP © OR ☐ HEIGHTC_VEGTY

☒ HEIGHTC_STATISTIC_METHOD ©

☒ HEIGHTC_STATISTIC_NUMBER

Understory Height

☐ Required

* HEIGHTC_U

* HEIGHTC_U_STATISTIC ©

☐ Optional

☐ HEIGHTC_U_SPP © OR ☐ HEIGHTC_U_V

☐ HEIGHTC_U_STATISTIC_METHOD ©

☐ HEIGHTC_U_STATISTIC_NUMBER

Applies to All

Required

☒ * HEIGHTC_DATE © OR ☐ * HEIGHTC_DATE_START ©

☐ * HEIGHTC_DATE_END

☐ Optional

☒ HEIGHTC_APPROACH

☐ HEIGHTC_DATE_UNC

☐ HEIGHTC_COMMENT

Download Custom CSV File

Submit completed CSV file at [Upload Data](#) using the BADM option (login required).

Combinations of © variables must be unique

Multiple entries (rows) per site can be submitted for this group.

Only one observation for the same combination of © variables is permitted.

✓ Combination of © variables are unique.

✗ Do not enter combination of © variables that are the same.

Observation	©	©	Contextual variable
HEIGHTC	HEIGHTC_STATISTIC	HEIGHTC_DATE	HEIGHTC_APPROACH
1-Required	1-Required	Required-c	Optional
m	LIST(STATISTIC)	YYYYMMDDHHMM	free text
9.8	Mean	2003	5 2x2m plots
10.2	Mean	2004	5 2x2m plots
0.4	Standard Deviation	2004	5 2x2m plots
13.2	Maximum	2004	5 2x2m plots
14.4	Maximum	2004	extracted from LIDAR

4

Enter BADM into customized CSV

Learn more: Combinations of © variables
<https://ameriflux.lbl.gov/data/badm/badm-basics/>

	A	B			E		G
1	SITE_ID	HEIGHTC	HEIGHTC_STATISTIC	HEIGHTC_STATISTIC_METHOD	HEIGHTC_STATISTIC_NUMBER	HEIGHTC_DATE	HEIGHTC_APPROACH
2	Required	1-Required	1-Required	1-Optional	1-Optional	Required-c	Optional
3	CC-sss	m	LIST(STATISTIC)	LIST(STATISTIC_METHOD)	integer number	YYYYMMDDHHMM	free text
4	XX-AMF	3.7	Mean	Aggregate of individual observat	202	2015	Trees sampled from 8 plots
5	XX-AMF	4.1	Mean	Aggregate of individual observat	202	2017	Trees sampled from 8 plots
6	XX-AMF	4.0	Mean	Aggregate of individual observat	202	2018	Trees sampled from 8 plots
7	XX-AMF	3	Mean	Expert estimate		2000	PI estimate
8	XX-AMF	3	Mean	Expert estimate		2005	PI estimate
9	XX-AMF	3.5	Mean	Expert estimate		2010	PI estimate
10	XX-AMF	4	Mean	Expert estimate		2015	PI estimate
11							
12							
13							

All OK ✓ — Ready to upload!

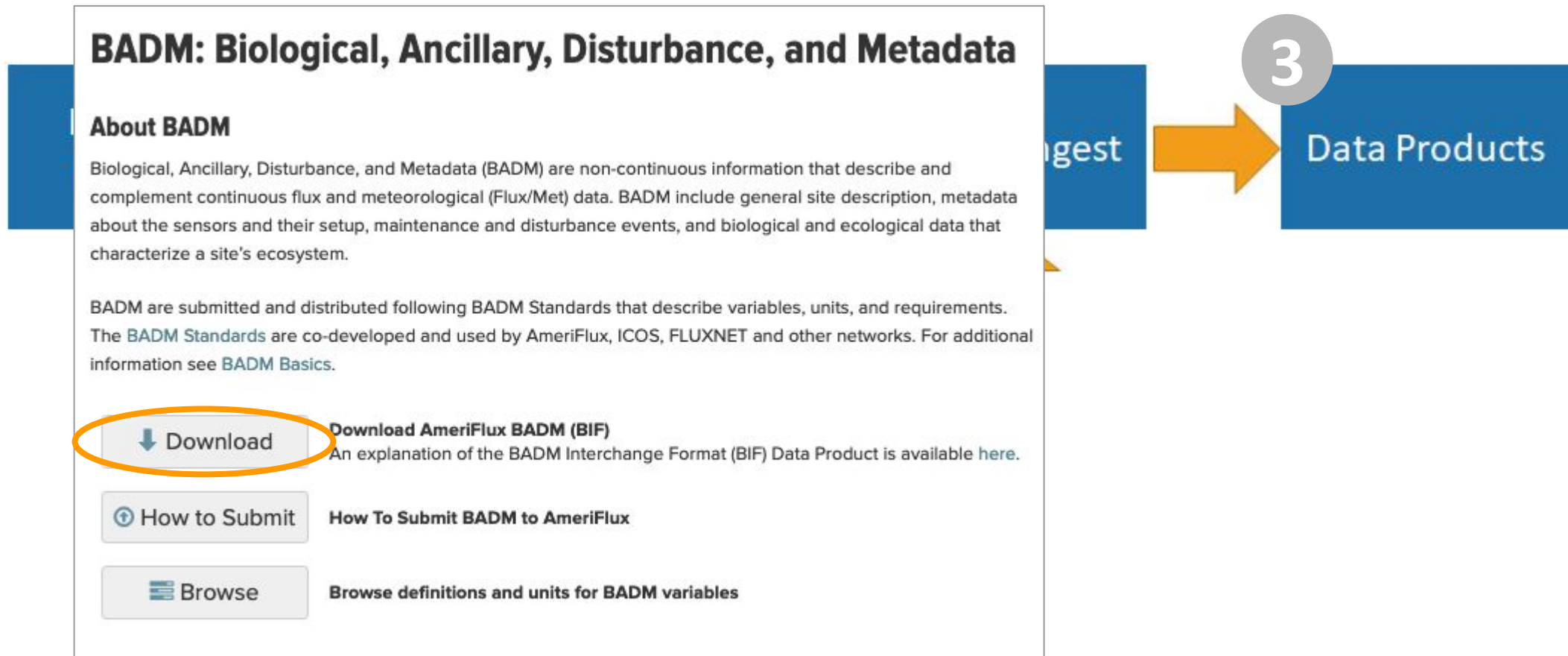
What happens after you upload BADM?

1. AMP will attempt to ingest submitted file
2. AMP will contact you if issues are found, you correct, and resubmit



What happens after you upload BADM?

1. AMP will attempt to ingest submitted file
2. AMP will contact you if issues are found, you correct, and resubmit
3. Awesome! Your BADM are downloadable in the BADM data product (BIF)



Reminder: Submit some BADM types with online editors

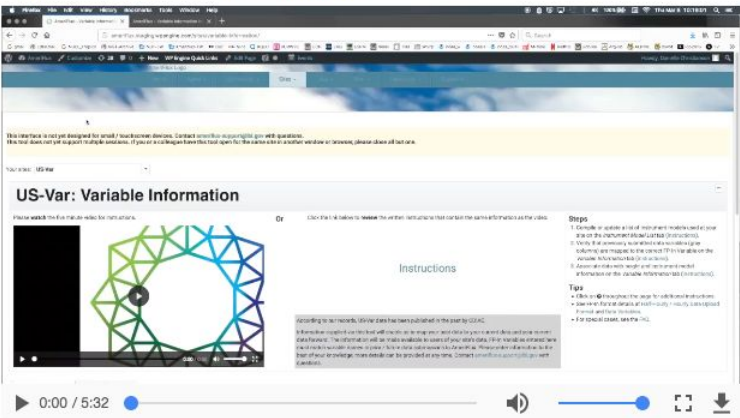
Submit Height / Sensor model BADM via Variable Information Tool

<https://ameriflux.lbl.gov/sites/variable-information>
(login and team membership required)

Your sites: US-Ton

US-Ton: Variable Information

Please watch the five minute video for instructions.



Or Click the link below to review the written instructions that contain the same information as the video:

Instructions

According to our records, US-Ton data have been published in the past by CDIAC.

Information supplied via this tool will enable us to map your past data to your current data and your current data forward. The information will be made available to users of your site's data. FP-In Variables entered here must match variable names in prior / future data submissions to AmeriFlux. Please enter information to the best of your knowledge; more details can be provided at any time. Contact ameriflux-support@lbl.gov with questions.

Steps

1. Compile or update a list of instrument models used at your site on the *Instrument Model List* tab (instructions).
2. Verify that previously submitted data variables (gray columns) are mapped to the correct FP-In Variable on the *Variable Information* tab (instructions).
3. Associate data with height and instrument model information on the *Variable Information* tab (instructions).

Tips

- Click on throughout the page for additional instructions.
- See FP-In format details at [Half-Hourly / Hourly Data Upload Format](#) and [Data Variables](#).
- For special cases, see the [FAQ](#).

Instrument Model List

Variable Information

Save

+ New Variable

Status

- ☒ Reviewed (Saved)
- ☐ Updated (NOT Saved)
- ☐ Not yet addressed (Saved)
- ☐ To be deleted (to undo)

☐ Show Historical Instruments

Customize Columns: 13 Columns Shown

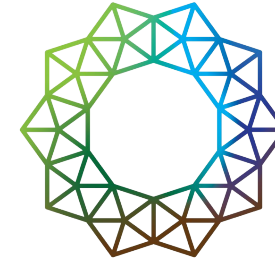
Gray columns are data in older formats and cannot be edited. Hover over column for details. View only useful columns with Customize Columns at right.

Site Team Variable	CDIAC Description	Early-version BASE Variable	Status	Reset	Delete	FP-In Variable	Reuse values from...	Height (meters)	Instrument Model	Start Date for Height / Instrument Model	Height / Instrument Model Change
FC_WPL_2D	FC_WPL_2D (umol m-2 s-1) CO2 flux with 2D rotation and WPL correction, quality are classified by "Fc_flag"	FC	<input type="checkbox"/>			FC_1_1_1		23.5	GA_OP-LI-COR LI-7500 SA-Gill Windmaster Pro	start of data	Add

We welcome questions / feedback
ameriflux-support@lbl.gov

Related links

- <https://ameriflux.lbl.gov/data/badm/>
- <https://ameriflux.lbl.gov/data/badm/badm-submission-instructions/>
- <https://ameriflux.lbl.gov/data/badm/badm-standards/>
- <https://ameriflux.lbl.gov/data/badm/badm-basics/>
- <https://ameriflux.lbl.gov/data/upload-data/>
- <https://ameriflux.lbl.gov/sites/variable-information/>
- <https://ameriflux.lbl.gov/data/data-processing-pipelines/>
- <https://ameriflux.lbl.gov/community/amp-webinar-series/>



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